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Farm Department.

Conducted by J. H. Brown, who lives on his farm at Climax, Mich., which is conducted as the Michigan Farmer Experiment Farm. All correspondence for this department should be sent to Climax, Mich.

THE EDITOR'S FARM NOTES.

SECOND ANNUAL EXCURSION.

More than a score of brother farmers have just notified the writer of their intention to take in the second annual excursion of "Michigan Farmer Folks."

In traveling through the State we have met several score of Farmer readers who have decided to go, and it now looks as though the largest and finest passenger steamer on the "Great Lakes" would hardly hold the crowd.

Since the notice of the excursion was given in this paper, three weeks ago, we have been repeatedly asked, "Where are you going, and what are the rates?"

We take this occasion to state that all details have not been arranged, but no doubt the publishers of The Farmer will give them out in the near future. So please be sure to save your "pin money" and go with us on this second excursion.

Several who went last year from Southern and Western Michigan have recently notified us that they will go again this year. All declared it the finest and cheapest pleasure trip they ever experienced.

The time set is between "oat harvest" and "corn cutting," the best time of the year, and occurs when farmers can leave their work with the least inconvenience.

POWER MILLS.

I have used a 12-foot steel windmill for more than a year, and it is surprising the power it has to cut stalks or grind feed.

But it will not grind thirty bushels an hour, as some of your correspondents represent theirs to do; but with a good breeze will grind ten bushels an hour, which is as fast as most farmers require.

It has all the power I want for home use. A larger one might be better if a man wanted to do custom grinding, but it is doubtful if that would pay every farmer. I have thought several times, when you are mentioning the success of different individuals' windmills, that it would be quite a favor to your readers if you mentioned the make of mill they have.

ABOUT GRINDER PLATES.

The mill I use gives good satisfaction, but the grinding rings wear out much faster than represented, and faster, I judge, than some other men's mills, from their reports. About one hundred bags of grain is all one set of plates will grind successfully.

There are two other mills, same as mine, near by that claim better work than I get. Another of a different make wears out at 60 or 70 bags. I understand some of my neighbors are "talking" windmill, and I would like them to get the best there is, if it is different from mine.

A POINT FOR PATRONS TO CONSIDER. It is a fact that every farmer ought to know that The Michigan Farmer is the best farm paper for Michigan farmers. It is surprising that any of P. of H. (Patron of Husbandry—Ed.) should think of doing without it.

Sanilac Co., Mich.

J. M.

GRINDING CAPACITY RATED TOO HIGH.

This is the fault of some manufacturers and advertisers, and there is no need of it. Then we farmers like to brag sometimes about what we can do—that is, it is our own defect, though possibly a hereditary taint.

We have never ground over 20 bushels per hour with our mill, and usually from 12 to 15 bushels. We want our corn and oats ground fine, and so we set the grinder burrs to run closely together.

We have used one set of burrs in our mill for three years, grinding many hundreds of bushels. While at home a few days ago we put in a new set, and found the old burrs were not very badly worn.

These burrs are conical and have a large grinding surface. Thus the work of grinding is done very close to the shaft. The principle of the arrangement is correct. The burrs fit perfectly and never rub together, even when the mill is empty.

One reason why our burrs work so nicely—and all our machinery, in fact—is because we take good care of it. All shafting is set to run perfectly true, and always kept well lubricated with as good a grade of oil as we can find.

By grinding the grain coarsely we could grind much faster, but we prefer finely ground grain for all our cattle, horses and pigs.

As to the size of wind-wheel for a power mill, 12 feet in diameter is enough for general use on many farms, unless one designs to run a fodder shredder. Our 16-foot wheel is none too large for running the 18-inch shredder, and we need a good wind to keep up the required speed of 1,500 to 1,800 revolutions per minute.

We, too, think every Patron should take The Farmer, and help in every way possible to advance the various interests of every agriculturist in the State.

DRILLED CORN.

I have been watching your Farm Notes to see if you were going to put in any drilled corn this spring. I expect to put in about 14 acres.

I think of buying a weeder. What kind would you recommend?

Case Co., Mich. WM. VAN NESS.

We shall not drill in our field corn this season. Last summer we drilled in 16 acres with a two-horse grain drill, setting the machine to put in about six quarts per acre.

This was the smallest amount we could set the drill for. Our corn was a little too thick to suit us, though we secured almost 100 bushels of ears per acre.

We had no trouble to keep the corn clean from weeds, and the work of harrowing, weeding and horse cultivation was never more easy to accomplish. The method of drilling was very satisfactory, and to be preferred in catching weather when fitting corn ground.

Upon the whole, we like drilled corn, and should have followed the same plan this season, but for the fact that we wish to try an experiment with a two-horse wire check rower.

WIRE CHECK ROWING CORN.

For several years we have heard so much about checking corn on moderately rolling ground by means of a wire stretched across the field. So much has been said about such practice being a failure, that we have refused to try the experiment for several years.

Now we have decided to check in the corn by wire on the same field that was drilled in last year. The machine is guaranteed to do good work in checking, and if it does not we shall not keep it, but will go back to drilling again next season.

We never used a wire check rower, and really do not need such a machine to plant our small fields of 20 acres. But we do not really see why more of these machines are not used on large farms, only moderately rolling, if the stories told by manufacturers and agents are 33 1/3 per cent true. At any rate, we shall test the matter for ourselves, and if it is a fizzle, it will be only one more.

Many times we have been asked at the institutes, and by our brother farmers, when visiting their homes, as to whether such a machine was really a success on rolling ground. We expect to know more about this matter before the season is over.

The wire check rower is about the only tool, used on Michigan farms, that the writer is not "expert" in handling. A photograph of some of the cross rows of corn will be taken, when the corn is high enough, to show how straight (or crooked) the rows are over the hills and hollows. The writer will do the work himself, unless called away from home on urgent business.

THE HORSE WEEDER.

We have used four of the leading patterns, in order to test them, and find them all good. Some improvements have been made within the last year or two. We hardly know which we would prefer.

The horse weeder is destined to come into more general use as its utility becomes more thoroughly understood. It is a special purpose tool, and of course cannot be used for everything.

For the Michigan Farmer.

WHAT SHALL HE DO?

I have lately bought a piece of land that is a very stiff clay. About six inches under the top soil is a blue clay. I dug down three feet and found nothing but blue clay with a very small percentage of sand.

Some of the land not far from it has gray sand mixed with the top clay. The man I bought the farm of had corn and potatoes there last year. I do not know what luck he had.

I am plowing it now to put corn on it and follow with wheat next fall. But when I saw what condition the soil was in I hesitated.

The land lies quite flat and needs draining. In a wet season the water stands there. I have no manure to put on it, and as I am a young farmer, just starting, I would like to hear from others, of more experience, what I had best do with it.

Would subsoiling, lime, or land plaster do any good?

A SUBSCRIBER.

Van Buren Co., Mich.

(We have had no experience with such soil, but would recommend draining as soon as possible. Such land is naturally cold and needs both drainage and aeration.

Cannot some one who lives in your section furnish you the needful information? We would be glad to hear from friend C. B. Charles, than whom there is no better authority in expert knowledge and treatment of such soils. —Ed.)

For the Michigan Farmer.

SOME FACTS ABOUT FERTILIZERS.

It is more than sixty years since I began experimenting with trees, plants and soil, and in all my occupation in the schoolroom, on the farm, in the market garden, orchard and nursery, it has been my greatest pleasure to observe the moods of nature and to study the organization, development and habits of living things.

My experiments always had an object in view, and a reasonable hope of predicated results. Even in cases of failure I found ample reward in the excitement of anticipation, and without this stimulating zest farm labor would have been a slavish drudgery, unworthy of the energies of an active, progressive life.

When a boy I pulled sorrel out of the corn hills in the field that lay between two limestone ledges, and my father burnt a limekiln for the purpose of using it on the land. But the sorrel grew just the same, and I remember how I saw it in after years climbing over a heap of refuse lime near the kiln. Let any one try the experiment, as I did in Illinois, of sowing lime on a patch of sorrel, and he will be convinced that it will produce no effect on its growth.

As a fertilizer I have found it useless upon all kinds of soils, and I ought to have known it without trial, for after exposure to the atmosphere it absorbs carbonic acid and is converted into insoluble carbonate of lime, and of no more account than sand.

Of all commercial fertilizers I have used I have found guano the most effective on worn-out soils. In Fairfax Co., Va., the old tobacco lands were so exhausted that in 1852 we could not get over 10 or 15 bushels of corn or wheat to the acre, and timothy, clover or buckwheat would not grow at all.

But with 50 lbs. of guano the buckwheat would lodge, and 150 lbs. would give from 30 to 50 bushels of corn to the acre, and another 150 lbs. added in the fall gave 25 to 30 bushels of wheat, which was followed with a heavy crop of clover and timothy.

I intend to try 100 lbs. on an acre here on corn ground that is to be followed with wheat in the fall, and if the effect is not visible to the naked eye on the strip through the middle of the field I shall not consider the experiment of enough value to repeat.

The guano should be mixed with an equal bulk of plaster and sowed broadcast after plowing. I think the use of

fertilizers in the drill or hill a makeshift that on poor ground may do more harm than good. I have used guano in the drill for potatoes after the potatoes are partly covered and have found it an invariable remedy for the scab fungus.

It is a great mistake to suppose that commercial fertilizers enter directly into the growth of the plant. The 300 lbs. of guano gave an increase of over a ton above any possible crops that could have been raised without its use. The elements of the fertilizer act chemically on the waste matter of the soil, converting it into soluble plant food. And as oxygen may be essential to the process, the fertilizer should not be buried in the ground beyond the reach of the atmosphere.

All the small grains, and even corn, feed near the surface, while the deeper roots which support the plant get their share washed to them by the rains, and it is a great waste to let the very substance they need lie dormant.

Calhoun Co., Mich. OBSERVER.
(We never could get any guano, but hope to secure some in time for seeding wheat next fall.—Ed.)

For the Michigan Farmer.

MANURING AND CROP ROTATION.

In reading the suggestions upon manuring in your issue of Jan. 15, by friend E. E. Owens, I thought of some experiences that I have had in the past 60 years, which I would like to get in shape so they might be of some benefit.

I commenced farming on my own account in 1844, being then 20 years old, previous to which an older brother and myself had been doing the larger part of the work on my father's farm.

One field had been in meadow for many years. Had been manured at different times, still it was sward-bound so the grass was light, frequently not more than 1,000 or 1,200 lbs. of hay to the acre. Another field had been planted to corn, manured in the hill, yet produced nothing great in crops.

I want particularly to speak of the meadow the last year before it was plowed. It was sowed with land plaster, which increased the growth. The following year plowed and planted to corn and the crop was enormous. The idea was to plant it again, to get a better crop. The sod was rotted but result was not as good a crop. The next year it was sowed to oats, and it was one of the largest crops I have ever seen.

I commenced farming soon after the above result. I used a manure building several years, and of course made and applied very much manure with good results.

But, with my experience, I have become convinced that there is no way to husband and use manure like commencing, say the first of October, to draw and spread manure on grass lands suitable for corn the next year. (That's our belief.—Ed.) It stimulates the grass and makes a strong sod. You notice in Mr. Owen's account, that where the straw stack had rotted down the corn was much the best.

Now, after grass is done growing, and fall and winter chores come on, draw your manure, made by horses, cattle, sheep, and swine, right to field as fast as made, and spread evenly upon your ground for corn the next season. There is no danger of getting land too rich for corn or roots.

In a regular crop rotation, I believe oats are the best to follow corn, although barley may be good on some soils. Then sow wheat, when the ground is plowed for wheat. If you have some manure that has been made during the summer, put manure on the poorest places. It will help the wheat, also insure a good catch of grass and clover seed.

A very good way is to mix clover and timothy and sow on the wheat ground. The following year mow for hay, the second year in grass, or fifth year in rotation, it is a good thing to pasture, for it is likely to destroy more or less worms and get in better shape for the manure to follow with corn.

So you see the rotation is corn, oats, wheat, hay, and pasture. With such a rotation, with what teams a man needs to do the work, then with enough cattle, sheep and hogs to utilize the coarse grains, and use up the hay, stalks and straw, to make more manure, to feed well-drained land, one ought to expect profitable crops, and make a good foundation for the next generation to do better.

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(Sorry we could find no name or address attached to this excellent article. It is safe to follow such good advice.—Ed.)

TILLAGE TOOLS AND METHODS.

Many times the best results in raising a crop are not attained, simply by improper or careless methods in fitting the seed bed. In the first place a man must have a good plow, and then very much depends upon the man using it. Any implement or tool that does not do good work should be discarded. Never purchase a plow which has only one feature to recommend it, and that is ease of draft.

A plow to do thorough work must be adjusted by a man who knows just what he wants, or in other words, a plowman. It would seem almost useless to tell a man how to plow, and yet going through the country and seeing how many fields are not more than half plowed it seems proper to say a word about it in connection with proper tillage. Strike the furrows straight and then keep them so by plowing each one the same width, and if a crook should get into one take it out before plowing several furrows all of them crooked.

Adjust the whiffletrees so that the horse in the furrow pulls straight from the center of the furrow, or in other words, don't use a long evenner. So many men don't realize how much more a horse is required to pull if the whiffletrees are so adjusted that the team is pulling against each other all the time. Have the evenner just twice the length of the distance from the nose of the plow to the center of the next furrow. The great majority of evenners are from six to ten inches longer than this or are used in the plow the same as on a wagon.

I believe a word of caution should be raised about not using a jointer. Every plow should have a good jointer adjusted so as to turn under all the coarse manure, stubble or grass in the field, so that when the field is plowed not a bit of it shows.

Prof Roberts says a jointer on a plow properly used is more effective than going over the field once with a spring-tooth harrow. My experience is that this is true on old land as well as sod.

Keep the plow points sharp and keep some extra ones always on hand. Oftentimes a dull point can be used again in early spring before the land gets very hard by excessive dry weather. But above all things, don't skim over the ground with a dull point to save buying a new one, even if you have only a little more plowing to do. The better work of a sharp point will pay the cost of the point many times over in the crop raised.

When plowing a large field in a dry time don't leave it untouched until you get it all plowed. Not only will you lose by evaporation, but when you come to fit it you can't fine it nearly so well as you could if you had gone over it with a harrow before it got so dry. In a very heavy clay soil this is particularly true. My experience is that good land should always be rolled before a harrow is put into it, thus putting down any furrows not nicely turned over and firming the seed bed more, besides making it fit easier.

It is important to have the harrow sharp. A dollar paid to the blacksmith in making the harrow sharp may save twice that amount in every piece of land fitted, in the ease of the work and thoroughness of the operation. Be sure the land is in perfect tilth before you attempt to put on the seed.

No matter if you are late getting in the crop, don't neglect fitting the ground well for the sake of getting the crop in a day or two sooner. One of the very best times to cultivate a hoed crop is before the crop is put on. Stir the ground deeply and well, always realizing the more it is stirred and the finer it is the more plant food is liberated.

After the crop is sowed many people roll the land and then leave it in that condition, never touching it again until harvest time. Experience has taught me that it is always best to go over the ground, in a few days after rolling it, with a light harrow, thus leaving the ground rough or stirred rather than in a hard, compact state.

If the piece is to be seeded in the spring with the grain I believe many people fail in not putting the grass seed in deep enough. This can be easily remedied by putting the seeder ahead of the drill rather than behind it, thus putting the seed in deeper. These are some of the things a farmer should always bear in mind if he is to raise successful crops.

Jefferson Co., N. Y.
(The above interests us very much.

We have read it over twice, and can indorse the sharp points advocated by friend Converse, as well as the plow points.

Very few practical farmers in Michigan now use a plow without a jointer attached. We could not plow without one, and expect to do a good job in turning under clover and manure.

For plowing during a dry time, we would suggest the use of a pole drag to follow the plow, rather than a harrow or roller. This for heavy clay loam soil.—Ed.)

PREVENTING SCAB IN POTATOES.

To the Editor of The Michigan Farmer.

Please tell me through The Farmer what the preparation is that is used for soaking potatoes in to prevent the scab, how to prepare it, and the method of applying the same. I would like to hear from farmers who have had experience in treating their seed potatoes whether it was a success or not.

FRED J. ROWLEY.

Shiawassee Co., Mich.

The most effective remedy for scab in the potato is to soak the seed in a solution of corrosive sublimate. Two ounces of corrosive sublimate are dissolved in two gallons of hot water. Let stand twelve hours, then add thirteen gallons of water. This makes 15 gallons in all. The potatoes intended for seed are put in a wire basket or in an old gunny sack, and placed in the solution, where they are allowed to remain an hour and a half. Then take out, allow them to drain until nearly dry, and then they are ready to cut for seed. It should be remembered that corrosive sublimate is a deadly poison, and care must be taken to keep away from the solution.

Another method is, cut the potatoes and then sprinkle them with flowers of sulphur until no more will adhere; the seed is then ready for planting. Sulphur is a good remedy if it can be applied so as to cover the seed well, but it will be difficult to do this, so we think the corrosive sublimate treatment will be the most effective.

One thing should always be remembered in connection with scab. The soil becomes more or less affected where a crop of scabby potatoes has been grown, and therefore should not be used again for the crop for a couple or three years. Then bins, baskets, or anything used to hold or handle scabby potatoes will infect the seed if they are used after it has been treated. You should therefore have fresh soil, and in planting the treated seed be sure and use none but new bags, baskets or boxes. To make the treatment effective all these conditions must be observed.

R. G.

From our Paris Correspondent.

WHAT FRENCH AGRICULTURISTS ARE DOING.

Paris, April 1, 1898.

In France not only oxen, but milch cows, are largely employed as draught animals, field labor, carting, etc. It was interesting to know if such employment, that renders important services, affected the yield of milk, and its quality. M. O. Stüttgen has conducted experiments during five weeks to ascertain a solution. The cows worked 12 hours daily, less 3 allowed for rest and meals. During this labor period the yield of milk diminished 7 to 8 per cent, exactly corresponding to the elimination of water by respiration and transpiration. The milk was analyzed daily. Pending work, the milk was richer in fatty substances; so was the milk after the night, though the quantity yielded was less abundant. Only in the evening milkings was a difference in buttery matters sensible. On the whole, the results of the daily milkings displayed no important differences, either in richness of butter or nitrogen, than that from cows all day at rest. The quantity of milk can be less, due to transpiration, but the percentage of butter is not altered.

Small cultivators ought now to be happy. They can, if industrious and of good character, obtain loans of money, less interest, for the charges are only nominal. The agricultural syndicates, to a certain degree, were stopped in their progress, due to the want of capital. They had since 1894 all the legislative facilities for obtaining money, only, as ever, the capitalists declined to loan, and the banks would incur no risks beyond 90 days—so useless for the farmer who requires about 12 months to turn his produce into cash. At the same time a bank cannot have its rolling capital tied up too long; that could under certain circumstances compromise its commercial standing. The Bank of France, that alone acts for the

State and has the right, exclusively, to issue notes, had its charter renewed on certain conditions, among others, to lend the State 40,000,000 francs till 1913, without interest, equal to an annual gift of 1,250,000 francs, plus 2,000,000 francs of its profits annually, during the continuance of the charter. These moneys have been concentrated, and form the nest-egg for the working of the Rural Regional Banks to be created, and worked modestly. There will be no head bank, so that is a big economy secured. These banks will work in with the agricultural syndicates, whose humble members it is the aim to help. The syndicate will back the applications, and make good any possible loss resulting from their recommendation. This sweeps away at once the local money-lender, the "gombeen" men, and even the work of honest notaries, whose fees had all the same to be met. Henceforth the small cultivator will not have to mortgage his little property and sweat till his death-bed to wipe out the debt. He will have only office expenses to meet, no stamp duties, no registration fees. Does he want to purchase a pair of oxen, carts, implements, drain a field, or reclaim a note? He applies for the loan, that he is bound to redeem within two years. But how is the bank protected or guaranteed? It has the security of the collective syndicate; the banks issue "bonds," redeemable within two years; their value is a veritable home circular letter; the holder, or the borrower, draws against the total by 3, 6, 9 or 12-month bills so that he is always repaying by installments within the two years. Money is thus always coming in to cover the risk. But the French press overlooks one coming success—for there can be no doubt about the latter—the working of the banks being subject to the financial inspectors of the treasury. People with money will then come forward with savings to lend. But ere 1913 the rural banks will drift into those wonderful popular banks, that form the backbone of the modest industries of Germany and Italy. However, the favors in store for the small French farmer will not end here. The system of "warrants," without removal if produced, will be taken up by the rural banks as soon as the storehouses or granaries can be constructed. A farmer can then obtain an advance on his produce to the extent of three-fourths of its value, and be independent of market "drops." The granaries licensed by the State will be worked on the same principle as the contents of bonded warehouses are managed for the other industries.

PLASTER ON CORN.

I would like to ask your opinion in regard to putting plaster on corn just after it comes up. How much plaster would you put on each hill, and do you think it would pay for the expense of putting it on?

Berrien Co., Mich. A SUBSCRIBER.
(Hardly think it pays, from our experience.—Ed.)



The Buckeye Hillside Cultivator.

Every farmer who has had anything like an extended experience on the farm is acquainted with the difficulties attending the growing of hoed or cultivated crops on hillside lands. The ordinary wheeled cultivator will not fit the case because no man living could keep the wheels from sliding upon the new row below and grinding it out by the root. No, the thing necessary is a specially constructed cultivator that will perform all the requirements of a first-class machine of this class and in addition possesses the ability to stand up to the row on the steepest hillside. These special requirements are met by this No. 16 Hillside Buckeye Cultivator. The leading feature is in the broken pivoted axle which is so arranged as to admit of guiding the machine perfectly with the feet. This arrangement is of greatest advantage on a hillside for the reason that the wheels may be so set or regulated as to run quartering, gathering or taking in an extra slice of land, which affords the resistance necessary to hold the machine to the row and the work. This machine operates equally well on level land and because of its sensitiveness and quick change of direction is particularly useful in cultivating crooked rows. It meets all the requirements of a first-class cultivator for every variety of crop. Write the manufacturers, P. P. Mast & Co., Springfield, Ohio, for circulars, prices, etc.

DWARF ESSEX RAPE.

Within six weeks from time of sowing it is ready for pasturing. One acre will carry 12 to 15 sheep from 6 to 8 weeks. Price by freight, or express: 1 lb., 10c.; 25 lbs., 8c. per lb.; 100-lb. lots, 7c. per lb.
S. M. ISBELL & CO.,
125, 127 and 129 W. Pearl St., Jackson, Mich.

Libe Stock.

CONDUCTED BY ROBERT GIBBONS.

Address all correspondence to MICHIGAN FARMER
Detroit, Mich.

PASTURE FOR THE COMING SEASON.

To the Editor of The Michigan Farmer:
Have been a reader of your most valuable paper the past year. Have been much interested in the questions asked and discussed. Allow me, if you please, to ask what course to pursue next season for pasture. Can rape be sown on grounds now in rye and to be pastured till June 15? Sown at that time when could it be pastured? Is rape of value for cattle as well as for sheep? Please state price of seed, the amount sown per acre, and how sown? Where can good seed be obtained?

St. Joe Co., Mich. C. C. C.
The above letter was sent to the dairy editor, but how long ago we cannot state, as it was not dated. Two other articles for this department came from the same source a number of weeks after they had been written. If our readers wish prompt replies they must send their queries direct to the person in charge of the department in which their inquiries belong. Another point: Correspondents must give their names in full, even if they do not wish them published. It is the only means we have of knowing that the party has a right to the information asked for.

A short time ago we printed full instructions regarding the cultivation and pasturing of the rape crop. We presume our correspondent did not notice it, and so we answer his queries, which were pretty fully answered in the article referred to.

It will be ample time to put in rape after June 15th. It should be ready to turn into by the first week in August. If your field is at all large, better divide it into two parts, sowing the second part about the first of July. Then your pasture will be continuous, as by the time the first field is eaten down, the other will be ready to turn into.

There is no class of live stock which will not be pleased to get into a field of rape. The plant is of the nature of cabbage, and is much relished by cattle, sheep and hogs, and all will do well on it. Horses and poultry are also very fond of it, but horses should not be given a chance to eat all they wish, as it may cause trouble. In putting in the rape we think it best to do so with a drill, so the ground can be kept worked while the plants are small, so as to stop the growth of weeds, and retain the moisture in the soil. The drill rows should be about 28 inches apart, and the seed required will be 2½ to 3 pounds per acre. If sown broadcast it will require 4 pounds per acre. The seed is for sale by all the leading seed houses, and it costs from 25 to 30 cents per lb., or from \$8 to \$10 per hundred lbs.

FEEDING SUGAR BEET PULP.

The State Agricultural College Experiment Station of Colorado, has issued a bulletin on the beet sugar industry of that state, which includes a great deal of information regarding the feeding of the pulp to live stock, and the results obtained from its use. This information will be of great interest to farmers who are thinking of raising beets as soon as a factory can be secured in their neighborhood. It shows that the beet sugar industry, once developed, will have an important and beneficial influence upon other lines of agriculture, especially stock feeding, which is continually growing in importance in this State. We give some extracts from this bulletin relating to stock feeding in Colorado and Nebraska:

At the Lehi sugar factory the pulp is carefully stored in immense silos built in the ground, without any covering. About half a per cent in weight of salt is sprinkled on every layer of pulp as it goes into the silos. These two silos are built of heavy timber and are 10 feet deep, 20 feet wide on the bottom, 24 feet wide on top, and 800 feet long. Storage capacity of both, 14,000 tons of pulp. They are floored.

Tracks are run into the center of these silos, which are open at one end. A water-way is built under the center of the tracks to carry away the water draining from the wet pulp. The tracks run between the feed yards, and horses pull the small cars out of the silos. The pulp is fed in

open troughs and the alfalfa hay from racks. The pulp is fed to both cattle and sheep. The stock have always access to plenty of hay, pulp and water. They never feed a pound of grain in fattening the stock, unless the pulp gives out. In 1895 they fed the pulp which had accumulated for three years. Both here and at Eddy the sheep seemed especially fond of the dry pulp from the top of the silos.

The cattle at Lehi were put on this feed November 3, 1897, and the sheep about two weeks later. The cattle get on full feed in about ten days, and the sheep at once. They were a rough lot of cattle, but many were then (Dec. 20) ready for the butcher. The sheep were mostly May lambs, with about 200 head of broken mouthed ewes. They were in splendid condition, not ten poor sheep in the lot. Supt. George Austin says that they feed about a hundred days; that cattle consume about 15 pounds of hay and 100 pounds of pulp per day, and the sheep two pounds of hay and three to four pounds of pulp per day. He said from the way the sheep were gaining they would reach the market averaging 90 pounds per head. (They were weighed into the yard at 60 pounds per head.) He also says that the pulp gives the best results after fermenting in silos for thirty days, and should not be fed before then. He says that if there be any criticism on this feed, it is that the stock get too fat, but that the sheep top the Chicago market and find ready sale also in foreign markets. They have not nearly enough pulp to supply the local demand.

At the Eddy, N. M. factory stock yards they are feeding only sheep this season. The sheep there are said to use eight pounds of pulp and one pound of hay per head per day.

From the Grand Island factory pulp is furnished to feed sheep at Shelton, Nebraska. Ed. Graham, (manager for E. F. Swift) and Matthews and Stockwell are feeding there. The latter wrote January 1, 1898, that they are feeding 25,000 head of lambs on the pulp; that they consume about three pounds per head per day, and that the freight on pulp is 30 cents per ton from Grand Island.

John Reimers has fed pulp to cattle for three years at Grand Island. He uses about 50 pounds of pulp, 20 pounds corn meal, a little bran, and oil cake, and the usual amount of hay per head per day, as a full ration.

Hake Bros., of Grand Island, Neb., fed 200 head of cattle and 20,000 head of lambs on beet pulp, at the factory feed yards this season. They have fed cattle on beet pulp, both there and at Norfolk for several years. They feed about 80 pounds of pulp and 12 to 20 pounds of corn meal per head per day. They say that the cattle coming to the feed yard from the ranges find the moist pulp a great help in making the change from grass feed to hay; say the sheep get on a full feed of pulp within 24 hours, and that the lambs use about 4 pounds of pulp and 1 to 1½ pounds of corn meal per head per day, mixed, beside the hay.

W. H. Butterfield fed 1,000 head of cattle on pulp at the Norfolk, Neb., sugar factory yards this season. Has fed there several years. He feeds about 70 pounds pulp mixed with 15 pounds corn meal per head per day; also all the hay they will eat. Says the steers on this feed use only about a ton of hay per head during the entire feeding season; says beet pulp is an especially fine feed for sheep.

One farmer pertinently says: "There is no better factory for the profitable use of sugar beets than running them through the live stock on the farm, and converting them into milk, meat and manure." An analysis shows the dry material contains about the same nitrogen, free extract, and crude protein and about one-half the crude fat of ground wheat. In Utah they are largely used as hog feed, and it is even claimed that their use will prevent the hog cholera.

The beet chips (tops) and leaves are largely fed where the beets are raised for the factories. In France the beet chips are worth \$2.70 and the leaves \$1.30 per ton.

The beet pulp produced at the sugar factories is of especial value as a food for live stock. At the Nebraska factory it is given away free. At other factories it is sold for 50 to 75 cents per ton. At or near all the factories a very large number of cattle and sheep are fed. It is a fine feed for dairy cows, but care must be taken not to feed to excess with alfalfa hay, as it is too fattening. It has proven to be especially good food for sheep, when used with alfalfa hay.

The factories produce in pulp about 50 per cent in weight of the beets, or say 180 tons per day at Lehi, Utah. In the silos it loses about 10 per cent more water by the natural compression, and is like a soft cheese. In Nebraska the pulp contains about .5 per cent sugar and in Utah about .3 per cent sugar.

In summing up results so far obtained in the beet sugar industry, the bulletin says:

That a single beet sugar factory will produce enough beet pulp in a single season's run of 100 days to fatten 35,000 head of sheep—the pulp filling the place of hundreds of cars of corn now shipped to this state every fall and winter. That this pulp would be produced just when needed for feeding, and should be a stimulus to that industry and a profit to a Colorado factory.

That to become a leading national industry, it must be so simplified as to be beyond political hazard and the need of a protective tariff.

That a closer relation must obtain between the producer of sugar in the field and those who extract it, at the factory, so that the profit may be believed to be more equitably shared. The present enormous expense of factory construction invites this, since the beet grower risks but a few dollars in farm machinery, and can stop growing beets any time, while the greatest risk to the factory, under proper management, is a shortage in its supply of beets.

WHAT HE THINKS OF THE HOG.

At the last meeting of the Texas Swine Breeders' Association the Hon. Barnett Gibbs gave an address, in which he spoke of the good qualities inherent in the hog, and what he expected him to do for the people of Texas. It is evident Mr. Gibbs is a warm admirer of the hog, and has been studying his history from the days of Moses until the present time. The world, he said, had never been able to get along without him. Moses had a hard time making the Jews let him alone, and Bismarck could not keep him out of Germany. The only reason Noah did not eat up the only specimens he had in the ark was because he had nothing to smoke his bacon with, or else put in a ham already smoked. The hog has been the mainstay of every nation, and generally in war those armies that had the biggest rations of salt pork won the battles. He is a thousand times better than five-cent cotton, because you can eat him, and if you don't want to eat him this year you can salt him down and eat him next year. Five-cent cotton has made him of more importance than ever, but he was always the most reliable payer of mortgages in the United States. I believe he is of sufficient importance to have a show all to himself, just as they have the horse show in New York.

Referring to the habits of the hog, he said: The hog is better than people think, even in his personal habits, if given a fair chance. He has inherited an uncomplaining disposition and don't turn up his nose at filth, but he thrives better and prefers babbling brooks and pastures green. In his seasoned state he is a better financial basis than even gold or silver, and a promise to pay in cured meat is at par or at a premium in every country except Turkey. If the free silver statesmen would canvass Texas on a platform of hog meat as a blood circulator they would do the state much good. Noah was told to pin his faith to a four-legged hog, and not a two-legged hog. I understand that the smart Yankee, seeing that Texas was going to be some hog herself, has sprung a new breed that has a streak of lean and a streak of fat exactly in the right place, and you might investigate this trick. The Irish always knew a good thing from the days of St. Patrick up to date, and they always pinned their faith to the pig. When the politicians and trusts fry the fat out of the people, why the people can only live by frying it out of the hog. One old sow has done more for America than all the eagles that ever flew; but in the early ages, before the hog was bred up, he got to keeping company with the devil and got a hard name, and for this reason never got on any coat of arms, not even of those millionaires of Chicago who made their fortunes out of him.

The hog is all right, and the inventive genius of man or nothing else will ever down him long at a time. It was thought at the time that cottonseed oil would hurt his standing as a grease maker, but it don't. In north Texas he is at home and breeds fast

and fattens faster than anywhere else, and now that we are building Texas packeries we will make Indiana and Illinois find a new market for their pork.

If I was not opposed to interfering by law with the personal habits of the people, I would favor a law that required every head of a family in Texas to always keep on hand one hog for himself, one for the old woman, and one for each of his children. We would then be fixed for war, high freight rates, and five-cent cotton. Gentlemen, the human system has to be greased even oftener than a politician or a farm wagon, and you are engaged in producing the only reliable grease for the business. There is a great deal in the hog. When educated he plays a good game of seven-up, uneducated he stakes his owner to play a stiff game. I would advise any lawyer or politician in going into the farm to bet his fees on the Texas hog, whether of the Berkshire or Poland-China breed.

The hog is as economical a boarder as ever the farmer had, but of course will eat lavishly if set before him. The hog has suffered in the eyes of the world for the want of beauty, yet a roast pig, with a red apple in his mouth has, to my mind, a poetical cast. The hog is worth more in Klondike than anything else, and he is worth more to Texas if he is handled right.

When every Texas town has its own packery, and Dallas has three of them, the hog will put us out of the hole financially. I don't believe the hog was ever possessed of the devil, but he multiplied so fast that there was not room for him on land and he had to plunge into the sea; besides Moses was in the sheep business and a bear on the hog market.

I believe the future of north Texas lays in pork production and packeries. If ever I write a poem it will be on hog and hominy, spareribs and backbones, not shipped from Chicago, but **corn, raised, and killed and cured** in north Texas. If I had known as much about politics as I do about hogs I would have been president of the United States. I know enough about politics not to express an opinion right here as to which is the best breed of hogs; they are all good enough, and all better than sea island or any other breed of five-cent cotton. The coming man in Texas industrial life is the hog king, and he will knock out the cattle king. There will come a time when the glorious lone star of Texas will not shine her brightest on Texas towns, and will not proudly flaunt around in a place dependent upon some other planet for her gravitation, but will anchor herself on the back of a Berkshire hog with a feeling of security, and on the side of the hog we will brand, "in hog signo vincet."

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The Horse.

CONDUCTED BY ROBERT GIBBONS.

Address all correspondence to MICHIGAN FARMER, Detroit, Mich.

THE KENTUCKY DERBY.

The Kentucky Derby, one of the great western events, was run at Louisville on Wednesday of last week. Although the weather was anything but pleasant, and the track muddy, over 15,000 people were on hand to see Kentucky's great race run. It was a dark, gloomy day, with rain, which finally ceased about two o'clock, when the sun came out and dried up a part of the mud. The track was considered about one and a half seconds slow. The starters were Plaudit, Lieber Karl, Isabey, and Han D'Or. Plaudit was the favorite with the Kentuckians, but Lieber Karl was the favorite with outsiders, and heavily backed up by a host of friends, who thought him the horse of the year from his easy wins this season.

The horses were sent away on the first break, with Lieber Karl in front, Isabey second, Plaudit third and Han D'Or last. Burns went out with Lieber Karl to make the pace, and he had command by half a length as they raced down to the stand, with Han D'Or second, Isabey third and Plaudit last, two lengths covering the bunch. These positions were maintained as they went around the lower turn and when they were straightened out on the backstretch Lieber Karl was a length and a half in front, while Simms had brought Plaudit up to second place. Down the home stretch they came with Simms hard at work on Plaudit. No thoroughbred ever responded better. Each stride enabled him to cut down the distance, and when they faced the wire in the stretch Lieber Karl had but a half a length leading, with Plaudit still lessening the distance. They were on even terms at the eighth pole, and then, amid the lusty shouts of the thousands that packed the stands, the son of Himyar thundered down the track and to the wire winner of the twenty-fourth Kentucky Derby. Lieber Karl finished second, half a length back because he had met his superior at the weights; Isabey was third, a half length away, and Han D'Or last by two lengths.

The time by quarters was 25½, 50½, 1:17, 1:43½, 2:00. The time in this race since the distance was reduced to a mile and a quarter is as follows: 1896, Ben Brush, 1:17 lbs., 2:07½; 1897, Typhoon II., 117 lbs., 2:12½; 1898, Plaudit, 117 lbs., 2:00. It was a good race for the condition of the track.

Plaudit is a brown colt by Himyar, dam imp. Cinderella; he carried 117 lbs. Lieber Karl, the second horse, is a chestnut colt by Forester, dam Daisy Woodruff; he carried 122 lbs. The third horse, Isabey, is a chestnut colt by Strathmore, dam Belle of the Highlands. It is altogether likely from the outcome of this race, that with the same weight up, Lieber Karl was rather a better horse on the day of the race than Plaudit. That five pounds additional was just enough to beat Lieber Karl and give the race to Plaudit.

OF COURSE THERE WILL BE OBJECTORS.

When the new rules for standard registration, which were adopted last week by the American Trotting Association, go into effect next November, there will be a field open for the establishment of a trotting stud book, in which may be registered the pedigrees of the fast trotters and the sires and dams of fast trotters, that will, together with their produce, be forever barred from the Trotting Register. As an illustration of how the rules will work, it may be said that were Directum, 2:05¼, and Hulda, 2:08½, still unregistered when the new rules go into effect, they would then be ineligible, and should the great pair be mated and the resulting foal take a record of two minutes, it would still have to remain outside of the trotting register, while a foal with three generations of standard ancestors, but unable to trot a mile in 2:30, would be eligible. The absurdity of the new standard will be more fully recognized when in the future some of the fastest trotters, bred in lines similar to those of Directum or Hulda, or when some great sire bred in lines similar to those of George Wilkes, Electioneer or Del-march shall be found to be shut out

of the book supposed to be open to the best representatives of the trotting-bred horse. The writer has for some years believed that the Register should be a medium wherein the pedigrees of horses might be recorded and their authenticity thus be established, leaving horsemen to use their own judgment on the value of the pedigrees so recorded. The adoption of the new rules will help to bring such a register or stud book to the fore, for a very fast and game trotting stallion, a great sire of race horses, or a mare productive of speed in the highest degree, will never be overlooked, even though such may be ineligible to standard registry. For such horses there will arise a necessity for some authoritative book in which their pedigrees may be recorded. That time is not so very far away, and unless the Register Association recognizes the demand for such a book some one else will.—Horse World.

No rules of registration can possibly be devised which will not work an injustice in some instances; but such injustice is more apparent than real. If the American trotter is to become a recognized breed, animals with outside blood, no matter how fast, must be eliminated. We have all seen half and three-quarter blood animals—horses, cattle and sheep—apparently better than their sires. Yet what would be thought of a system of registry which would admit them to record as representatives of the special breed to which they owe their best qualities? The gradual weeding out of horses with a limited amount of trotting blood is certainly in the line of progress and greater development. If the trotting horse can produce such animals as named by the World, should not his blood be kept pure and intensified so that he will offer surer results to the breeder? Every improved breed of live stock has had to go through this process of development before reaching a high standard, and the thoroughbred would never be the animal he is to-day if his get from mares of other blood had been recorded in the stud book because they could run fast, or were fine animals.

HORSE GOSSIP.

Philadelphia is to have a horse show. It will open Tuesday, May 24, and end Saturday, May 28.

Que Allen, 2:00¾, won his first race in Europe at Vienna, March 25, beating Athanio, Azmon, Bravado and others.

Ornament is the favorite in the Brooklyn and Suburban handicaps. The horses he will have to meet are not of high class, the best being Ben Brush, Tillo, Typhoon II., Dr. Catlett, Cleophus, Algol and Presbyterian. Ben Brush is the best of the lot, and should give Ornament a good race.

The Lorillard-Beresford stable of American horses did well at the Newmarket meeting, Elin, starting second choice, won the 3-year-old welter, purse \$1,750, the owners standing to win \$20,000 in bets, and Pascola, by Simon Magus, out of Perception, won the maiden 2-year-old plate.

John Splan writes from Lexington, Ky.: "It seems to me that good horses are getting scarcer every day. The country is full of cheap animals with no merit or prospects. There are only a few stock farms in this state doing anything of moment in the way of breeding trotters."

The semi-annual meeting of the American Trotting Association was held at Chicago May 3d. When the rules recently adopted by the National Trotting Association with regard to the licensing of drivers and placing a ban on hoppers came up for consideration as to the advisability of their adoption by the American Association, there were but two votes, out of the 206 represented at the meeting, in their favor. The following officers were elected for the ensuing two years: President, W. P. Ijams, Terre Haute, Ind.; first vice-president, G. B. McFall, Oskaloosa, Ia.; directors, N. J. Coleman, St. Louis; Thomas H. Gill, Milwaukee; J. W. Fleming, Columbus, O.; Fred T. Moran, Detroit; E. C. Lewis, Kansas City. J. H. Steiner retains the position of secretary.

The Register Association, says the Horse World, has decided to issue the Year Book for 1898 on the same lines as the one for 1897. After this year, when a man wants to look up the standing of Red Wilkes or any other prominent stallion as a sire, he will only have to go through seven volumes to get the desired information. Should he want to find the number of standard performers to the credit of some prom-

inent brood mare, another trip will have to be taken through all the volumes, as under producing mares not even the total number of their foals having records are given. A more convenient set of works than the Year Books make cannot be found among works of a statistical nature. The objection to issuing the Year Book in a more convenient form is that it would be too expensive to admit of any great number of men buying it, although how this is known is hard to see. At present any one wanting the Year Book must buy six volumes in order to receive any great benefit from any one volume, and that entails a greater outlay of money than would a single complete volume, even though it cost twice as much as is now charged for the very incomplete volumes. Why would it not be wise to issue a complete volume once in five years, at least, so that every beginner would not have to buy a whole library in order to possess the statistics relating to racing and breeding? With which criticism of the World we heartily agree.

Here is what the Mark Lane Express said of a recent sale of American horses, held at Glasgow, Scotland: "There were 107 animals catalogued, consisting principally of brongham, carriage and matching horses, while there were also a number suitable for van and cart purposes, as well as a few cobs. The outstanding feature of the sale was the exceptionally grand lot of 62 from Kentucky. Without doubt these were the finest United States horses ever exported to Britain which were passed under the hammer by public auction. Although not long landed, they showed remarkably well, exhibiting splendid style and action, were of good substance, suitable ages and fashionable colors. There was a very large attendance of buyers from almost all the centers of Scotland, while many representatives were also present from the chief English towns, and a few from Ireland. Business during the day was of a satisfactory character, although for some of the classes bidding was comparatively slow. The ages of the animals ranged from five to six years. They were from 14.2 to 17 hands high. The best demand was for the carriage and matching horses, for which bids came readily, at times the competition being most animated, and the best class of them were disposed of from 67 to 90, and one dark brown horse made up to 140 guineas."

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Sheep and Wool.

WHAT THE COTSWOLD CAN DO.

To the Editor of the Michigan Farmer.

I have read with interest in recent issues of The Farmer of two lambs; one a Lincoln and the other a Hampshire grade, weighing respectively 13½ and 14 lbs., at birth. Now, Mr. Editor, I have a lamb story to tell, to the truthfulness of which I am willing to make affidavit, and I can also produce two reliable witnesses who will do the same. On April 9th, one of our ewes dropped a ram lamb, which, at two hours old, weighed 15½ lbs. strong, and on May 1st, being 22 days old, weighing 37½ lbs. Since its birth this lamb and its mother have been with a band composed of 59 ewes and 73 lambs, so has not been crowded nor stuffed for the purpose of making a record.

Our sheep are Cotswold grades—a Cotswold cross with Spanish Merinos, and are owned and bred by George Yerkes, of Oakland Co. This lamb is the second cross, being three-quarters Cotswold. I do not consider him a prodigy at all, as we have others nearly or quite as large, but he is the only one I weighed at birth.

April 14th we delivered to J. D. McLaren, at Novi, 39 three-quarters Cotswold lambs, of an average age of 11 months, including several pairs of twins, which averaged 112 lbs. per head. One month previous (or at an average of 10 months) we clipped from those ram lambs 399½ lbs. of wool, an average of 10¼ lbs. per head. Now, Mr. Editor, I have no wish to impose on your good nature, but I could not resist the temptation to put in a word in defense of the Cotswold.

Oakland County, Mich. E. C. BRYAN.
(Certainly the record given above is a good one. The Cotswold is a very large sheep, and a quick grower. It is a light shearer, however, its mutton-making abilities being thought of the most value by its improvers. The cross on the Merino, while it would not help either the size or the quick growth of the lambs, would help the fleece very materially, both in weight and quality. The average of 10¼ lbs. of wool per head is excellent, as the fleeces would be of light shrinkage. One point we would suggest, and that is those lambs would sell better if marketed a little earlier. Only exporters care for lambs as heavy as 112 lbs. per head, and if they are out of the market, as is frequently the case, lambs as heavy as these are apt to be slow sellers. Still the weight attained at the age is a good example of what the Cotswold can do under fair conditions.—Ed. Farmer.)

TREATMENT OF PARASITIC LUNG DISEASE OF THE SHEEP.

(From the Journal of the Royal Agricultural Society of England.)

In the first place, the writer disclaims any intention to teach the farmer his business, but in accepting without hesitation the account which the flock-master himself will give of the circumstances under which the invasion of parasites occurs year after year, he is bound to suggest that the conditions of the sheep's existence are less favorable to them than to the parasites which destroy them. It is perfectly well known that the infested animals themselves provide the means for the continuance of the parasites which feed on them. A few sheep containing in their lungs the worms which have been described, even though they might not themselves give any evidence of suffering from them, would contribute to a considerable extent to the contamination of the lands on which they feed. When the few become hundreds, the mischief is necessarily increased in proportion. Overcrowding is unquestionably one cause, and an important one, of the contamination of sheep lands; and constantly feeding on the same grounds is another. It may be objected by way of protest that neither of these things can be avoided; that a man who has a certain quantity of land must manage to keep a certain number of sheep upon it in order to make it pay; but this necessity does not in the slightest degree alter the fact that the conditions mentioned are inimical to the welfare of the sheep. Another indirect cause of disease is the unavoidable exposure to climatic changes, and another is the one which is constantly the subject of complaint

by the farmer himself—his short supply of food. Exposure and deficiency of food necessarily induce debility of the system of the sheep, and in this state they become perfectly easy victims to the parasites which infest them. Again, it may be safely affirmed of every pasture on which parasites are abundantly present that the circumstances are favorable to their existence; in other words, that there is a redundancy of moisture in the soil or in patches. Stagnant pools, or even small, scarcely noticeable puddles, may harbor myriads of the germs of parasites, ready to take up their residence in the warm-blooded animal.

It must be obvious that very little will be gained by limiting preventive or curative measures to the diseased animals, while the causes of the disease, both direct and contributory, are allowed to flourish undisturbed. The treatment of parasitic lung disease in the sheep will therefore necessarily come under two divisions; one which is strictly within the province of the veterinary surgeon, and the other entirely the business of the farmer.

Taking the veterinary division first, as being the one which is directly concerned with the cure of the disease, it may be pointed out, in the first place, that there is very little encouragement for the veterinary practitioner to devote himself to the treatment of this class of diseases in animals of the farm; and the most that he is commonly expected to do is to supply the flock-master with a mixture, to be given in certain doses, with the view of destroying the worms, which is tantamount to saying that nothing in the way of curative treatment is attempted until the disease is so well established that any one can detect it. As a rule, nothing at all is done until the worms have taken up a strong position, from which experience proves it is not very easy to dislodge them by the use of the ordinary remedies, such as turpentine, creosote, camphorated spirit, fumigations with tar, carbolic acid, or sulphur, or by the injection into the windpipe of carbolic acid, creosote, and chloroform mixed with oil. In this latter method, which has been successful in many cases, the skill of the professional man is absolutely necessary. It is by no means an easy task to puncture the windpipe with a fine needle-pointed syringe and inject the proper quantity of material. At the same time a pretender may go through the performance with apparent success by simply passing the needle through the skin without entering the trachea at all. The objection to this plan of treatment is mainly that, when a large number of animals have to be treated, considerable time is necessarily occupied; indeed a skilled operator will hardly manage with less than five minutes for each animal. At any rate, if he could successfully inject twenty in the course of an hour, he would have done very good work indeed.

In reference to the *Strongylus rufescens*, it is necessary to state at once that injection into the windpipe, or indeed any other form of treatment, may be looked upon as nearly hopeless. The embryos of the worm have been found alive and perfectly active in sheep which have been treated with a course of arsenic, sulphate of iron, and turpentine, the treatment being carried over several weeks, and the subjects of it being at last killed by the injection of prussic acid. They have also been found alive in a portion of the lung which has been kept for several hours in a strong solution of corrosive sublimate. After this experience, therefore, it would be absurd to suggest that any drug which could be introduced would kill these worms, even if it killed the sheep.

Under the second heading, that of the agricultural aspect of the treatment, the writer has very little to say, for the reason which has already been given, and for the further reason that he does not know how the flock-master is to find new feeding-grounds for his sheep in order to avoid those which he knows to be infested with the embryos of parasites. He may, however, venture to suggest that top-dressings of lime or salt at proper times, efficient drainage and ridding off stagnant pools, putting sheep under shelter during night, and not turning them out in the morning too early (it would be absurd in this climate to say until the sun appears), and adopting the practice of giving them a good meal of dry and properly salted food before they go upon the dangerous ground, might do something in the way of prevention. The problem which has to be solved has reference to prevention rather than cure, which, so far as the lung-worms

are concerned, the *Strongylus rufescens* especially, cannot be undertaken with much hope of success. Prevention, however, is more promising.

It is as true as ever it was that certain phases of the life-history of thread-worms are still obscure. This want of knowledge, however, does not constitute a very serious objection against the adoption of preventive measures. There is sufficient evidence to satisfy any one that the embryos of the worms are scattered freely over the feeding-grounds, and, whether they pass through an intermediate host or not, they somehow acquire a sufficient development to enable them to take up their residence in the sheep which feed on the infested grounds. The best hope of success must rest on the use of means to intercept the young worms before they can affect an entrance into the body of the intended host. The farmer's aim, indeed, should be to treat these invisible enemies as he would if he could see them in their thousands creeping about the pastures as he walked over his farm.

When the worms have once taken up their position, one essential thing which can be done, without neglecting medical treatment, is to support the system of the infested animals so as to enable them to resist the effects of the invasion.

THE SHEEP INDUSTRY IN THE UNITED STATES.

While there is nothing new in the following from Prof. Thomas Shaw, and published in the Farmer's Voice, it is so clearly stated that we give it a place:

The importance of the sheep industry to the United States cannot be estimated by the mathematician. It cannot be stated accurately in figures. It would not be fair to the sheep industry to say that the maximum of its value is represented by the number of sheep in the country, valued at so much per head. This arises from the intimate relation which exists between sheep husbandry and fertility, and between fertility and the production of maximum crops.

In reckoning the profit on growing sheep it is customary to place a value on the lamb crop and on the wool, and to deduct from that a sum representing the cost of maintenance. The difference between these is said to represent the profit. But that mode of reckoning only tells half the story, for the service rendered by each animal in destroying weeds and in fertilizing the soil is oftentimes fully equal to the cash returns which it gives to the owner.

Sheep ought to be multiplied in the land because of their utility in destroying weeds. Introduce a small band of sheep on every farm. Give them a chance to do the work of scavengers. Utilize a portion of the land every year in growing a succession of pastures for them and they will clean the farm more effectually than could be done at large outlay in destroying weeds in other ways.

Some men claim that it is not fair to the sheep to make it a weed destroyer; but those who talk thus know not whereof they speak. Sheep are not fools in the choice of foods. They don't eat what they don't relish, hence if they devour weeds, it is usually because they relish them, and relish them they will if allowed to eat them when

they are yet tender and succulent. And when weeds become woody and produce seeds sheep will gather the seeds with great diligence when they refuse to eat the woody stem that produced them.

As distributors of fertility on the farm sheep have never had an equal since the world began. It is that property in sheep which has given rise to the trite proverb that the sheep has a golden hoof. The abandoned farms of New England are being reclaimed by the restorative power of sheep. They are gradually driving the cattle from the ranges, but this is not matter for regret, since the equilibrium of fertility on the ranges can be far better maintained through the growing of sheep upon them than through the growing of cattle. At least half of the \$50,000,000 that is being paid out annually in the eastern states for commercial fertilizers could be saved by the multiplication of sheep upon those eastern farms. And a great portion of those \$50,000,000 and more that are being put out every year from the Mississippi valley in the fertilizers contained in exported feed-stuffs could likewise be saved if sheep were so increased that much of this food would be fed at home.

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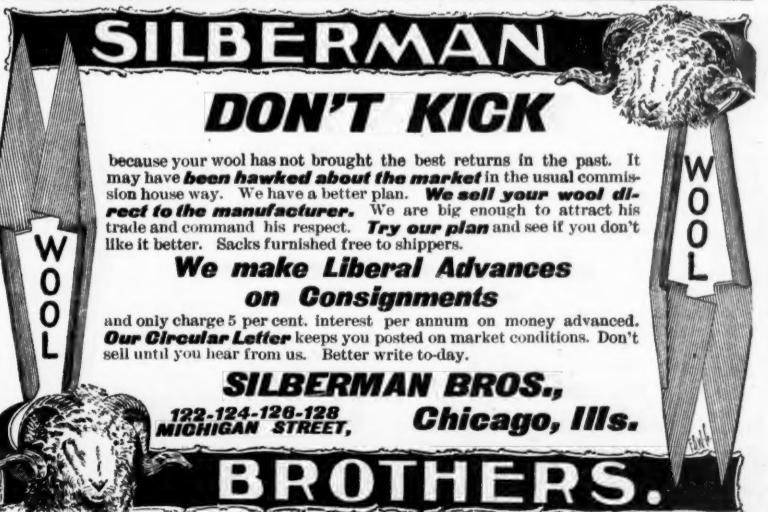


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Farmers' Clubs.

CONDUCTED BY A. C. BIRD.

All correspondence for this department should be addressed to A. C. Bird, Highland, Mich.

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All communications relating to the organization of new clubs should be addressed to C. M. Pierce, Elva, Mich.

A SUMMING UP OF THE RURAL SCHOOL DISCUSSION.

No question was ever discussed with more interest and better effect by the Farmers' Clubs of Michigan than that announced for April, "The present rural school system. How can it be improved?" Scarcely a club of the entire three hundred failed to give the question earnest and deliberate consideration. These discussions and the reports thereof in these columns are an effectual answer to the few so-called educationalists in this State who have repeatedly urged the need of a complete reorganization of the existing school system.

This discussion, faithfully representing the careful and deliberate conclusions of more than 20,000 of the farmers of this State, those who are most interested in the rural schools and those who would be most affected by any radical changes in the present system, establishes the following facts beyond peradventure of a doubt.

1st. The township unit system has few friends in Michigan. Only three clubs endorsed the same, although nearly every club in the State had the system under consideration during the discussion.

2nd. The present system, as a system, is rarely condemned.

3rd. There is a well defined determination among the patrons of these schools to increase their efficiency in every way possible, and a generally unanimous opinion that the present system affords every possible opportunity for the encouragement of this effort.

It has been a source of great satisfaction to the editor of this department to note in these reports from week to week a substantially unanimous endorsement of his editorial on the question preceding the discussion. We still believe, and are confirmed in our belief by the recent reports in these columns, that the first great necessity is the exercise of greater care in the selection of teachers. To the teachers must we look for every practical and enduring improvement in our schools, and their selection should be a matter of grave concern to every patron of the district. If this were so it would also mean greater care in the selection of school officers and greatly increased interest in general school work. With this secured, good buildings and pleasant surroundings, the library and all necessary apparatus would follow as a matter of course.

This is not mere theory. Thousands of good rural schools in this State today attest to the practicability of these words. Those who say nay are little acquainted with the magnificent work now being done under the present system. The patrons of every district can and must work out their own salvation along these lines, and no system could afford them greater opportunity or more encouragement for successful work than the present one. Further legislative enactments can do nothing to help those who will not help themselves under the present system.

When the patrons of these districts are asked by their representatives in the coming legislature, "What can we do for the rural schools?" the safest answer, and the one productive of the best results will be, "Let them alone." More legislation is not needed.

THE MOST SUCCESSFUL FARMERS' MUTUAL INSURANCE COMPANY IN MICHIGAN.

In another column we publish, under the heading, "One Farmers' Mutual Insurance Company," the promised article by Secretary H. R. Palmer of the Southern Washtenaw Company. This company, it will be remembered by

readers of this department, has been the most successful of any of the older companies in the State. It has been doing business for twenty-seven years and its average annual assessments have been only sixty-five cents per thousand dollars. The intensely practical article by Mr. Palmer, who has been the secretary of this company for the past ten years, will be carefully read by all who are interested in this question of mutual insurance, and the importance of the subject leads us to invite further discussion in these columns of the questions involved. We do this at the request of Mr. Palmer and of many of our readers who are deeply interested in the matter.

ONE FARMERS' MUTUAL INSURANCE COMPANY.

From a small beginning mutual fire insurance has grown to be of vital importance to the farmers of Michigan. I am glad that The Michigan Farmer has taken up the matter and invites discussion through its columns of the methods employed by the various companies in appraising property, writing policies, adjusting and paying losses. I have enjoyed reading the several articles published in The Farmer on insurance of farm property and indeed I hope they may lead to a more thoughtful consideration of what is to most farmers a very important question: How, when, and in what company shall we insure? as well as, What plan of insurance seems to offer a sure payment in case of loss without an almost prohibitory assessment? I say this because many of the mutual companies of the State, through mismanagement and profligacy, have come to the point where their rate is so high that their business can be successfully competed for by stock companies.

The solution of this problem of cheaper insurance lies in a great measure with the farmers themselves:

1st. Because many are allowed to pervert the word insurance to mean indemnity, and insure to that extent that they lose their interest in the property that each should have and thus become negligent and careless.
2nd. But a small proportion of those insured make a point of attending the annual meetings and there making an honest effort to see that the affairs of the company are conducted in a businesslike and economical manner.

In answer to your questions I would state that our company, the Southern Washtenaw, commenced business in April, 1871. It covers a territory of but four townships. Has had from the beginning the competition of two mutual companies covering the entire county, including the four townships in which we do business. We insure for full value and pay two-thirds, both on real and personal property, thus placing the insured in a position where he must inevitably be a loser to a certain extent. Have been secretary (secretary is also treasurer) for the last ten years. Make an assessment to cover each loss, which has averaged one each year, the lowest being .25 on each \$1,000 of stock and highest \$1.75.

You ask my opinion for our continuous low rate. I answer: 1st. Paying but two-thirds of actual loss. 2nd. A policy of taking a large number of small risks rather than a few large ones, though, as a matter of fact, we never have refused a good risk on account of size and have a number from \$8,000 to \$12,000. 3rd. A good class of property and policy holders, though possibly no better than are to be found in many other localities in Michigan.

HENRY R. PALMER.
Sec'y Southern Washtenaw Farmers' Mutual Fire Ins. Co.

REPORTS FROM LOCAL CLUBS.

A NEW CLUB.

The first regular meeting of the Highbank Farmers' Club was held at the home of Mr. and Mrs. D. C. Warner, April 29th. Question for discussion, "Postal Savings Banks." Nearly everyone thought that it would be better than for the government to issue bonds. A general program was also carried out, with a question box appended.

Barry Co. E. C. EDMONDS, Cor. Sec.
WEST AVON FARMERS' CLUB.

Club met at the home of Mr. and Mrs. George Ross, April 26th. A pleasant and profitable afternoon was spent in discussing many questions of interest to farmers and farmers' wives. Next meeting occurs in four weeks at W. R. Newman's.

MRS. L. W. FISHER, Cor. Sec.
Oakland Co.

ARBUTUS FARMERS' CLUB.
Club met at the home of Mr. and Mrs. Stewart Gorton, April 23d, with

30 in attendance. Aside from the general program of recitations, readings, etc., your correspondent gave a talk on "Farming and stock raising in Oscoda Co." This business is now being demonstrated to be a sure way to make some money. Men with some capital are now engaging in it quite extensively. After more readings and recitations a talk was given by Rev. Lewis. He thinks our club is running into a literary society instead of discussing farming interests, a thought in which your correspondent fully agrees.

"Gardening" will be the topic for the next meeting, to be held at the residence of Mr. and Mrs. Miles Colvin, May 28th.

Oscoda Co. O. R. VANTINE, Cor. Sec.
COLUMBUS FARMERS' CLUB.

Club was entertained by Mr. and Mrs. Wellington Congdon, April 27th. About 60 members were present and seven new members were added that day. Mrs. Clayton Fuller gave a very interesting and instructive paper on "Housecleaning." Her words received the hearty approbation of the men, since she said there should be plenty of baking done before beginning to clean, and regular meals thereafter. She would use paper under hay for carpet. Be sure to clean floors before woodwork, and do no better work in parlor than in cellar, for much of the good health of the family depends on the purity of the latter. Mr. O. Fenton gave his experience in successful potato raising in detail. Discussion brought out the following: There should be two pieces in each hill, with an eye on each piece. Should be rowed, three feet apart each way. Small seed can sometimes be used. More depends on the soil than on the size of the seed. Club meets at Wm. Bunker's on May 25th.

MRS. RALPH GRAHAM, Cor. Sec.
St. Clair Co.
DEERFIELD FARMERS' CLUB.

On April 21st the club was held at the residence of John Boettner, who made all feel at home by his welcoming address. The first topic, "The proper culture and the best variety of corn to raise," was led by Wm. Salisbury. He preferred a clover sod plowed in the fall and the yellow dent variety of corn. Others did not agree with him, as the "smut nose" variety had its friends there, who claimed it was the best to feed in the fall. All were agreed that the selection of seed should be made at husking time or before cutting. The topic, "Influence of Associates," was led in a well-prepared paper by Mrs. Samuel Topley. She said that many young men and women could show that their downfall was due to the choice they had made of associates in early life. Mrs. Steward said, "Show me the persons with whom they associate and I will tell you of their character." Parents should be very careful of their children, as bad literature is as bad as bad company. Topic, "Does improved live stock pay the average farmer of to-day?" All agreed that it did.

Isabella Co. N. V. COOMER, Cor. Sec.
FENTON AND ARGENTINE FARMERS' CLUB.

April meeting held at the residence of Henry Whitney. In a paper on "Postal Savings Banks," Mr. Swarthout gave an able discourse and showed that he had given the subject much study. After the paper had been discussed by several members it was voted that this club and vicinity petition the government to create a postal savings bank system. A committee was appointed to wait upon the non-members in the vicinity to secure their names to the petition. A paper on "Parliamentary Law," by Varnum Fletcher, followed. Next meeting at the residence of John Fowler, May 7.

Genesee Co. EDWIN PRATT, Sec.
MANCERLONA AND CUSTER FARMERS' CLUB.

Although a very stormy day, about 25 of our members met with Mr. and Mrs. Davis, April 20th. Mr. Davis read the poems, "Betsy and I Are Out" and "The Wants of Man." Mrs. Swan read from The Michigan Farmer one or two selections. "Free rural mail delivery" was discussed at considerable length. Next meeting with Mr. and Mrs. David Line.

Antrim Co. B. D. ELDER, Cor. Sec.
COE, CHIPPEWA AND LINCOLN FARMERS' CLUB.

Annual meeting held at the residence of Jacob Kratz, March 31st. The following officers were elected: President, J. J. Gilmore; Vice-President, J. W. Moore; Secretary, E. H. Estes; Treasurer, Mrs. Daniel Childs; Directors, Messrs. Wm. Atkin and Jacob Gruber. Adjourned to meet with Clarence Fansett, April 28th.

C. H. ADAMS, Sec.
The April meeting was held on the 28th at the home of Clarence Fansett.

Committees for three months on entertainment, refreshment, program and music were appointed. A very interesting and practical paper by C. W. Hudson on "Mixed Farming vs. Special Farming" was well received, and a general discussion followed. A paper by Mrs. E. H. Estes on "Household Economy" advised rigid economy without parsimony, showing many ways in which it can be practiced in the household, but objected strongly to the cutting down of the reading matter of the family. Next meeting with John Ettmyer, May 26th.

Isabella Co. E. H. ESTES, Sec.
WATERLOO FARMERS' CLUB.

April meeting held on the 9th with Mr. and Mrs. Wm. Randolph. Mr. Hutton read a paper on "The Half Bushel of '97," followed by Mrs. E. B. Parks with an excellent paper on "Decision and Strength of Character." After a fine literary program the Association question was taken up. Several members were opposed to the township unit system. We need better text books, better and more apparatus, libraries, better qualified teachers, better school officers, more visiting of schools by parents and more interest taken in educational matters. The club would like to know what became of the money derived from the sale of Section 16 of school lands in the townships of the State.

Jackson Co. A. W. SUMNER, Cor. Sec.
(The grant of these funds provided that only the income derived therefrom could be used for the purposes named. The State adopted the policy of using the funds derived from the sale of school lands to pay off the bonded debt of the State, instead of investing the funds as at first contemplated. The schools have lost nothing through this. The State pays annually into the primary school fund seven per cent interest on the entire proceeds of the sale of these lands.—Ed.)

SOUTH JACKSON FARMERS' CLUB.

All South Jackson's meetings are successful and the meeting held at the home of Mr. and Mrs. Wm. Hutchins on April 29, was no exception to this general rule. Of course we had a fine day, we always do, and the hundred and more people present enjoyed themselves most heartily.

The fires of patriotism burned so brightly that Pres. Strong had considerable difficulty to hold the club down to business. It's tame work talking agriculture when all one's thoughts are of Cuba and the "boys in blue." Still, "Hay and Its Handling," received very fair treatment from Hon. J. C. Sharp, Pres. Strong and Messrs. Reed, Hammond, Comett and Hutchins. Mr. Reed is a strong advocate of salted hay. He uses about two quarts to a ton and thinks the food value much increased.

By unanimous vote of the club, the reporter was instructed to have the paper upon the second topic of discussion published in full. It will, therefore, be found in next issue. There was much discussion, but no dissenting voice was raised as to the value of the influence of flowers and music.

There was a brief discussion of the present "burial permit" law. The general opinion seemed that, though the law is often very inconvenient, it is still a pretty good thing.

The club voted to join the County Association.

Miss Celia Hatch will have a paper upon "The Characteristics of True Womanhood," and John Frettenburg will discuss the Association question at the next meeting, which will be held with Mr. and Mrs. Warren Ford on the last Saturday in May.

H. M. C.
MAPLE RIVER FARMERS' CLUB.

The regular monthly meeting of the club was entertained by Mr. and Mrs. O. C. Moore at their home in Shiawassee. A full and interesting program was carried out. The Association question: "Our present school system; How can it be improved?" was presented by Miss Edith G. Seeley with an interesting and instructive paper. Miss Seeley said in part: The present system, which has been in effect for some ten years, has many commendable features. The creation of the office of county school commissioner was a step in the right direction; much good has come and will continue to come from the work of efficient officers. In responsibility, the school boards stand next; as a general rule the school board does not do as much for the good of the school as should be the case. The patrons must not overlook the fact that they are the ones to whom the teacher must look for co-operation and aid. Much of the reason for criticism is in the want of thoroughness in work.

Various branches, such as reading for instance, are badly neglected. Civil government is almost entirely crowded out, one reason is that it is not called for in examinations for the high schools. It is of the utmost importance that the school board understand its business and see to it that matters are conducted properly. Something should be devised to improve the work of the pupils; perhaps a superintendent to look after the work of the pupils. The next regular meeting will be held at the home of Mr. and Mrs. Theron Gladden, Thursday, May 26th.

C. P. REYNOLDS, Cor. Sec.

FOOD ADULTERATION.

BY HON. E. O. GROSVENOR, STATE DAIRY AND FOOD COMMISSIONER.

(Concluded from last week.)

Each one of these groups of food adulterations may be discussed in two directions, namely, in relation to the fraud perpetrated upon the consumer, and to the effect upon the public health. The first group of adulterants just given, namely, the addition of foreign substance for bulk and weight, as also the extraction of some valuable ingredient, are considered by all concerned, simply in the light of frauds. During the work of this Department, hundreds of pounds, yes, I may say thousands of pounds of adulterants have been found in articles classed in group one, a few of which I shall here make special mention of, and which have been gradually improving, until at the present time, with few exceptions, it is as difficult to find the adulterated as it was to find the pure. Analyses of samples taken by inspectors showed as high as 70 per cent starch in mustard, pepper that contained nothing of that article except the hulls, the balance being made up of rice, corn, wheat, coconut shells, sago and cayenne pepper. Cream tartar, made principally of corn starch, acid phosphate of lime, alum and plaster paris. Two years ago it was almost impossible to find a pure article of cream tartar upon the market. No wonder the good wife could not get her biscuits to rise and was compelled to resort to something to take its place. Although the substitute (baking powder) does the work, many brands are fully as harmful as the imitation cream tartar. Ginger was found adulterated with an equal amount of plaster paris; this was to cheapen and give weight. The greater amount of ground or broken coffee upon the market was composed of from 15 to 20 per cent adulterants. In fact, it was quite difficult to find a sample of any article that was not colored to improve its looks or something added to it or taken from it to cheapen, not excepting lard, butter or milk.

The charge of fraud in those cases falling into the second group of adulterations enumerated, namely, if it is an imitation of or is sold under the name of another article, is very easily established. A variety of distilled vinegar, colored to deceive, costing the manufacturer not more than 2 or 3 cents a gallon has been falsely branded and sold all over the country for pure cider vinegar and at a price which so utterly paralyzed the sale of genuine cider vinegar that millions of bushels of apples, annually, were allowed to go to waste in this State alone. The same state of affairs exists with oleomargarine and is one of the most vexed questions with which the court of public opinion has to deal at the present time. Each kind of butter has its friends and its enemies and they are by no means confined to the producers of and dealers in the respective commodities. It is sufficient to say that the same arguments used to defend artificially colored vinegar are advanced in support of artificially colored oleomargarine. Even where the dealer displays the cards "Oleomargarine sold or used here" and labels the package, the fraud is but partially checked, for the greater part finds its way to hotel, restaurant and boarding house tables, where its color enables the proprietors to impose upon their guests, who generally believe they are getting butter, and would not eat oleomargarine knowingly. The natural color of oleomargarine is white or very nearly so. It would not, in its natural color be mistaken for butter, but when colored yellow, it is very deceiving. I have always been taught that white is an emblem of purity. Has it of late become an unpopular color? Does any one ask that drinking water, milk, bread, etc., be artificially colored? Manufacturers and dealers in such painted wares know better than anyone else that the principal part of their trade is owing to the fact that the majority of those who

consume such articles are not aware of what they are using. Yet since the vigorous enforcement of the law against the sale of colored oleomargarine, the sales of this product have decreased and the price of butter has increased. According to the report of the United States Department of Agriculture there are about 52,000,000 pounds of butter made in Michigan annually; if the price of butter has been raised 2 cents, we have a gain of \$1,040,000. Last year there were more than 330 oleo dealers, and to-day there are only some forty. Baking powder is a product the American people are especially interested in on account of the immense quantities consumed in this country. There is no recognized standard for the composition of baking powders, either in this country or abroad. To prove from a legal point of view that a powder is adulterated it would be necessary to show that it contains some substance injurious to health. As a matter of fact, any powder composition that is healthful, and which, in solution in moist dough, will generate carbonic acid gas and "raise" bread, or cause it to be porous and light may be properly called a baking powder. And, accordingly, we find very many varieties or brands of baking powders on the market made from widely different materials. The best baking powder is, of course, that in which the largest amount of carbonic gas is generated to the spoonful of powder and the least amount and least hurtful character of the resultant salt remains in the bread. They are generally classified according to the nature of the acid constituent they contain, and are composed of three principals, namely, an acid, Alkali and a preservative, better known as a filler. The acid principals are either cream tartar, phosphate or alum, although there are many powders which are mixtures of at least two different kinds. The alkali principal is always bicarbonate of soda or baking soda, and the filler is composed of starch. This principal is used to keep the preparation from the atmosphere that moisture may not gather and prevent action between the chemicals themselves, so that the preparation may be kept indefinitely. It is through the use of alum and the excessive amount of filler used that the consumer is defrauded in baking powders. As there is no legal standard regulating the per cent of starch filler required for the acid principal, many manufacturers use 50 and 70 per cent, when only 20 and 40 per cent are required, thereby cheating the consumer out of one-half the price of the package. Cream tartar and phosphate powders have never been questioned as to their being harmful, but there is a grave question as to the effect of alum powders. Again alum powders are very cheap and are too often sold as among the first-class, the purchaser having no means of knowing of what it is composed. Had our last Legislature passed the baking powder bill that came before them these objectionable frauds would now have all been done away with. Glucose is probably the leading adulterant upon the market. It is largely used in syrups, jellies and cheap confections, and has only about one-third the sweetness of cane sugar. It is wholesome and nutritious, but owing to its cheapness and its close relation to cane sugar the sophisticator is enabled to cheat and defraud the consumer. From its cheapness immense quantities were used in the manufacture of "Imitation Fruit Jelly," and was formerly known and sold for pure fruit jelly. This jelly was made by mixing together glucose and water with a very little apple juice colored with red aniline. Hundreds of tons of this stuff were sold at less than 4 cents a pound for pure apple jelly, raspberry jelly, grape jelly, and in fact any kind of jelly a person desired. This was one of the frauds and deceptions that caused thousands of bushels of fruit to go to waste for the want of a demand. Since the law has compelled the labelling of it for what it really is, and prohibited its being artificially colored, the demand is now virtually nothing.

Those that compose the third group as stated, consisting of diseased meats, rotten vegetables and impure milk cannot under the present laws and appropriation be successfully regulated and must be left for the present to local legislation.

Those of the fourth and fifth groups, where means are employed to improve the appearances of an inferior article of food or added ingredient which is poisonous or injurious to health, including some articles heretofore mentioned in the other groups as being made of substances deleterious to

health, are subjects for the second point of this discussion, namely, "As to the effect upon the public health." The relation of this class of adulterations to the health of the consumer cannot always be shown in so clear a light. In fact the opinions of scientific men and other distinguished persons differ widely on this question, those who regard the use of these foods with suspicion being sadly in the minority. Under these conditions it is not to be wondered at that parties interested in the manufacture and sale of these commodities fail to see any harm in their use whatever.

This class of adulterations may injuriously affect the public health in two ways. First, when the actual condition of a food unfit for consumption on account of change or decomposition is hereby obscured; and secondly, when the substances added for this purpose are in themselves injurious to health; and it is only fair to say that there is a wide difference of opinion of both physicians and chemists upon these subjects.

In conclusion, I desire to make an illustration of what the cost has been to the consumer in just one simple article of food found adulterated upon the markets of this State. In 1895 there were 19,937,422 pounds of whole pepper imported into this country. Michigan's consumption, according to its population, would be one-thirtieth or about 665,000 pounds. The wholesale price of this unground would be not to exceed \$35,000. When ground and put upon the market the average retail price would be about 30 cents a pound, or a total cost to the consumer of \$199,500, but not more than three-fourths is ground for sale; which would reduce the cost to about \$150,000. At the time our State food law came into effect (September 1, 1895) samples were taken quite generally without knowledge, as at the present time, to their purity, and under analysis 90 per cent proved to be adulterated. The adulterated samples contained from 10 to 90 per cent of substances other than pep-

per, showing them on the average to contain about 50 per cent of adulterants. Thus one-half the total amount, less the 10 per cent found pure, or about \$70,000 of good, hard money was being paid out each year by the consumer for something supposed to be pepper, when it was mostly buckwheat hulls, wheat middlings, rice, corn, ground olive stones and such like, touched up with a little cayenne pepper to give it snap. To-day 10 per cent would cover all the adulterated pepper being sold upon this market. If what I have here stated is true and the United States Department of Agriculture can be relied upon regarding the amount of food products consumed, I believe I have fully substantiated what I have heretofore said, that 15 per cent of all food products consumed in Michigan was too low an estimate, but granting that it is a fair estimate, from a personal knowledge of the work of this department since its inception, I am confident I can prove to any honest, fair-minded person that there has been at least 75 per cent improvement in nearly all food products being sold or offered for sale in this State, and on the basis that has been mentioned, more than \$16,000,000 annually is being saved to the consumers in Michigan—and this at an expense of less than \$20,000 per year.

The officers of the department, with the assistance of the governor and the attorney general, are doing their very best to enforce the laws. The prosecuting attorneys, whose duties are to prosecute all complaints brought before them, have generally shown a willingness to assist in the work, but these officers should have the hearty support of the people; political pulls and favoritism must be entirely thrown aside.

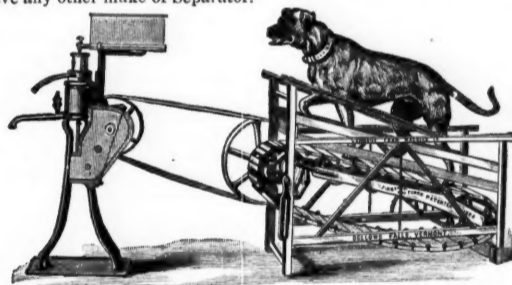
There is no question that the people of this State do not realize the danger they have been in, or are now standing, or they would give greater support and demand greater protection; and for the people to demand is for them to secure.

Works Speak Louder than Words

This is especially applicable to

The Improved U. S. Separator

Anything we may say of its good qualities would be inadequate to fully express the superiority of its work. We are receiving constantly letters from users telling how well pleased they are with the Improved U. S.; how clean it skims; how easy it runs; how little work it is to take care of—there being so few parts; how it has increased the yield and improved the quality of the butter, so that they not only have more butter to sell, but it commands a higher price; how little the expense of running is—few repairs, and that they would not have any other make of Separator.



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First Prize Dog or Sheep Power

which is the finest thing of its kind made. It is not only unequalled as a power for light-weight animals to run machinery with, but Dog Breeders say it is a fine thing to exercise dogs on.

Clinton, Conn., March 10, 1898.

The goods have arrived and been set up. Mr. Pratt is much pleased with the Improved Separator, and thinks the dog power the best he ever saw. He is a large dog breeder, and considers it a fine thing to exercise his dogs on.

HENRY M. MARSH.

If you wish anything in the Dairy line, it will pay you to investigate our goods before purchasing elsewhere. Catalogues free on application.

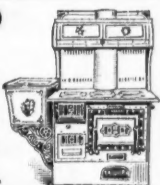
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TRIUMPH STEEL RANGE into every section of the United States, we will for a short time deliver at your depot free of charge our highest grade Steel Range for \$25.00. The regular retail price is \$50.00. It has six 8-inch lids. Top cooking surface is 30x34 inches. Oven 12 inches high, 17 inches wide and 21½ inches deep, and 15 gallon reservoir. Weight 400 lbs. Burns wood or coal. Write for Free Descriptive Pamphlet. Best Range made.

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Miscellaneous.

THE LOVER'S QUEST.

BY ERNEST GLANVILLE,
Author of "The Lost Heiress," "The Fossicker,"
"A Fair Colonist," "The Golden Rock," etc.

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CHAPTER I.

"I would like very much to know if it is the same," muttered Miles Venning, abstractedly, as he studied the signature to a letter in his hand.

Mr. Venning was junior partner in the large Birmingham house of Lorimer & Co., and the letter was an important order for two thousand Martini-Henry rifles and 500,000 rounds of ball ammunition, the whole to be delivered, by a trusty agent of the firm, at Zanzibar. It was signed "R. Mark Sterndale." The order was covered by instructions to draw on the writer through a South African bank, and a telegram to the manager at headquarters in London had brought a satisfactory reply.

The senior partner having satisfied himself that the security was all right, had passed on the letter to Mr. Venning, with a recommendation to clear the order without delay.

"This is a serious matter," said Venning. "Would it not be better to delay until we have found out for whom these arms are intended?"

"That is stated. They are for Zanzibar."

"Exactly; but are they for the arming of the slave dealers or native tribes in opposition to the British?"

"Excuse me, my dear fellow, but I haven't time to go into politics or possibilities. If you deal in weapons you must sell 'em; and when you sell 'em you can't make stipulations. Just push that order through, there's a good chap," and the senior hustled out of the room, and out of this story, to make his way to the golf links.

Miles Venning, still unconvinced, was frowning over the letter, when his eye was caught by the name of "R. Mark Sterndale." The name revived a memory. He forgot his scruples about the delivery of the arms in an absorbing recollection of an incident which happened to him the previous year in Wales.

How vividly the whole scene came back to him. Descending the steep northern side of the Foll Vas, he had come with a spring and a shout to the brink of a small dark lake, which he thought he had to himself, when a faint cry warned him of another presence, and looking round he saw a girl standing on a rock beside a great boulder, within a few yards of him.

He lifted his hat with an apology for having startled her, when another glance showed that she held a trout rod in her hand, with the top lowered in the water, and the line apparently fouled.

"Allow me to help you," he said, with a smile, stepping from rock to rock. "I am an angler myself."

"Thank you," with a vivid blush, "but I can manage alone. Please go."

She spoke quickly, almost angrily, and he was turning away, somewhat ruffled at her peremptory tone, when he saw that she was barefooted. The next moment he was down on his knees, gently moving the hook which was firmly fixed in the white instep.

"The barb has gone right in," he said, cutting the gut. "Please sit down," he added, gently forcing her to a sitting position on the boulder. "I shall have to cut it out," he said, after a pause, looking up into her face.

She nodded her head, with tight lips. Seizing the wounded foot firmly in one hand, he made a slight incision, then, first pressing the hook down he gave a sharp tug and drew it out. The pain must have been excessive, but she made no cry.

"I am afraid," he said, "I must have caused this accident by startling you as you were making a cast."

"Yes, you did; but I can manage now, thank you," and she took up her rod again, studiously turning her shoulder to him.

"You must not fish any more."

"Must not?"

"Certainly. You must rest your foot."

She was so young, so pretty, so helpless, that he felt he ought to take her up in his arms and carry her home, wherever that may have been.

"I am all right," she said, in a voice that trembled slightly. "Please leave me."

He lingered, reluctant to leave her in trouble.

"It would be a real kindness if you would allow me to help you in some way."

She put her wounded foot to the ground, and it trembled as she rested her weight on it.

"How stupid," she said, sinking to the rock again. "I promised father he should have trout to his tea."

"Ah," he said, with a smile, "then my duty is clear; your father must not be disappointed."

Taking the rod, he walked along the banks to the rocky outlet where there was a ruffle on the waters, and very soon he was casting the fly with a deftness born of long experience. He grew quite absorbed in his art, and it was not until a timid voice almost at his elbow told him that it was time for her to go, that he realized how completely he had forgotten her.

"Why didn't you warn me before?" he said, still keeping his eyes fixed on the water, as he played with a last fish. "There," he added, drawing the fish to the shore, "that makes the round dozen. They are not large, but these lake trout are always sweet."

"Thank you. I am sure my father will enjoy them; and how surprised he will be, for he declared I would not catch one."

She laughed joyfully, having forgotten her trouble, as he neatly bagged the catch with sweet-scented heather, and a smile was on her lips when he looked at her again. Looking once, he looked again, with a growing wonder at her beauty, and a sense of astonishment that she had in an hour grown from a pretty child into a beautiful girl, gracious and self-possessed. Her hair, neatly coiled under the little straw hat, was dark; her eyes of a violet hue, shaded by long black lashes; her chin smooth and rounded with a tiny dimple; her features regular, and the rich complexion just slightly tanned by the mountain air. Her face sparkled with intelligence, and the erect young figure was the embodiment of grace and health.

"You will, I hope, allow me to carry the basket," he said, with a touch of deference, adding, "my name is Venning—Miles Venning."

"And do you think," she said, with a smile, "that such a belated introduction gives you the right to carry the fish you have caught? I warn you we have a long way to go, and the going will take time, for my foot is tender. Don't apologize again. It was my own awkwardness."

She moved off then, and the way for half-a-mile was too rough for conversation, and he had been content to lag behind and watch her move along, using his walking stick for a support. After that, for a full hour he had walked with her between old grey stone walls, then among leafy ways by the side of the tumbling trout stream, to the quaint village of Aber. Much he had learned concerning her and her father, for having swiftly determined from his manner that this stranger was a gentleman, she treated him frankly, almost as if he had been an old friend. Right to the gate he had gone, and she had called her father from his easy chair on the verandah to be introduced and to hear of the adventure.

"My father, Mr. Sterndale—Mr. Venning," she had said; "and see what a basket of trout."

"Ah, Laura, this comes of letting you go by yourself away among the mountains. I had a foreboding you would get into mischief," and the father, a tall, thin, dark man, with a grizzled moustache, rested his hand affectionately on her shoulder.

"And are these all the thanks you have for these lovely fish?"

"Certainly not, my dear; I was about to ask Mr. Venning if he would do us the honor to take tea. The spoils to the victor, you know."

Both father and daughter looked at him, and there was so much unaffected goodwill in their faces that he at once accepted.

How well he remembered that evening. How vividly she had described over and over again the adventure, and how like a big schoolboy her father had chafed her about her fishing, and how, afterwards, when wishing good-bye, she had whispered to him:

"I'm so glad you came. Father has not been so like his old self for months."

Then the acquaintance, which had promised so much to him, had stopped. The next day he had been summoned back to business, and on returning several days later, he was bitterly disappointed to find that Mr. and Miss Sterndale had gone. Nor did his guarded inquiries discover anything of their

whereabouts. And now a year after, he had come upon the name again.

"It may be the same," he muttered, staring at the signature. "I remember he talked of living in Africa. If it is, I wonder if she is with him."

This thought grew upon him all that day, and in the night he worked himself into a fever about her, living perhaps among treacherous savages in some fever-stricken spot. With his mind in this uneasy state he slept, and sleeping he dreamt. He was on the banks of a great river, whose dark waters came swiftly from between towering walls of rock, and, as he stood, a great wave, suddenly rising, swept him off his feet and tossed him to a cavern in the rock, where he found stored many cases of rifles, marked with the name of his firm. And presently there came two men, one white and the other black, and the two of them removed the arms to the mouth of the cave, and the river disappeared, and in its place was a small valley, hemmed in by walls of rock, and in the valley were thousands of savage warriors, to whom others were serving arms. Then he saw a hut in the woods, and a girl at the door, struggling with the white man who had entered the cave, and he tried in vain to go to her rescue, but each time there came between him and her a flood of black waters. He woke with a shudder, and even when awake he saw the face of the girl he had met in Wales. And when he slept once more he dreamt of her again, and, as before, she was in danger.

"Well," said the senior partner next morning, "I hope you have cleared that order, and found a man to take charge of the goods."

"I have decided to go myself. I have had no holiday, and, besides, it would be well for one of us to visit Africa. You have said so, many times."

"It would be deuced awkward for you to leave just now."

"Why now, more than at any other time? What is the use of putting the visit off indefinitely?"

"Humph, my boy, you have grown hot on this very suddenly. The last time I suggested a trip you were not at all anxious. How long will you be away?"

"From two to three months. Three weeks to Zanzibar, four weeks there for business, and a trip into the game country, and three weeks returning."

"Shooting, eh? You don't take into account the risk to life, or the prospect of being captured by the niggers?"

"Oh, the country thereabouts is quite peaceful."

"Very well, go by all means, if you are bent on it. But mark my words, Miles, you will never get back in three months, and if you go inland I shall have to send an expedition after you."

So Miles Venning took ship for a long voyage, on the slight chance that the Sterndale he had met the previous year was the author of the letter, and on the even more remote prospect that if the father were out in Africa, the daughter would be with him. Miles was no longer very young. He was, in fact, on the shady side of thirty, and it had, for quite ten years, been a standing grievance with his woman friends that he would not fall in love. His one married sister had given him up in despair as a hopeless bachelor, after two separate desperate attempts to win him to matrimony, with the aid of one superior woman and a giddy girl, both of whom heartily disliked him from the outset. The fact was that about the time when, in the ordinary course of a man's career, Miles should have been gaining his spurs in chivalrous attendance on dames, he was in South America, roughing it among all sorts of turbulent men and adventurous women, on the firm's business, and that experience had made him singularly reserved. No woman yet had had patience to discover if there was a nature worth knowing under his quiet exterior, and so he, without in any way being a woman-hater, had reached the years of thirty-five without having fallen a victim to a woman's charms.

Even now, when on board the Indian liner, on his way to Aden, he would not for one moment admit to himself that his decision had in any way been taken out of sentiment, and while he was in the Bay of Biscay, he began a systematic study from blue books of the people and country in Central Africa, under the belief, as he persuaded himself, that his real object was to develop the civilization of the race by the sale of arms.

There was nothing but his solemnity that was at all repellent about Miles, and his solemnity was merely a habit. His figure was straight and athletic, his brown eyes clear and well opened, and his manner as perfect as it could be in a man who never seemed to notice what a woman wore, and who never told stories in the smoking room after ten o'clock.

The men soon made up their minds that he was a stick, all save three, equally silent, who seemed to take an extraordinary comfort from standing in one particular spot for an hour in the morning staring at the sea, or from walking steadily up and down the deck before dinner without speaking. They merely smoked and walked and turned in dumb sympathy. The women determined that he had a sorrow, and looked at him tenderly, until a bright little body decided the mystery.

While Miles was slowly pacing the deck, she dropped into a chair on his route, and as he passed allowed her book to drop to the deck from her listless fingers, while her wide eyes were fixed in silent absorption on the vast horizon. He picked the book up and held it out to her. But she gazed on with her chin in her hand.

"You have dropped your book," he said, quietly.

"How you startled me," she said, with a vivid blush. "But I was lost in wonder of the sea. Isn't it big?"

"Yes," he said, turning to look at the heaving ocean as if a new light had been thrown on it. "It is big."

"And so altogether hopelessly blue," she added, with a pathetic expression.

"Yes, it is blue, isn't it?"

"Now, you are laughing at me, Mr. Venning, and I thought you would understand."

She turned her big eyes upon him with such a reproachful look, and her little mouth trembled.

"I am sure I'm not laughing," he said, earnestly.

"Oh, I'm so glad," she said, looking at him with rapt expression that made him almost nervous. "I knew I felt that there must be some sympathy between us—there always is, you know, between people who let the sea into the secret of their sorrows—as you do."

"Oh," he hastened to say, with a twinkle, "I'm a good sailor."

(To be continued.)



"You Owe It to Her."

If you are the mother of a young girl who is approaching the time when girlhood merges into womanhood do not hesitate to speak freely and frankly with her about the things which most closely concern her future happiness. If she is subject to any weakness of the delicate, special organism of womanhood, make it your business to see that this is properly corrected, and that she starts upon womanhood's career with full womanly strength and capacity. She will bless you for it all her life.

There is no need of "examinations" and "local applications." Sound professional advice may be obtained free of charge, by writing to Dr. R. V. Pierce, chief consulting physician to the Invalids' Hotel and Surgical Institute, of Buffalo, N. Y., whose thirty years' occupancy of this position has made him recognized among the most eminent of living specialists in the treatment of woman's diseases.

Every case submitted to him by mail receives careful consideration. Efficient and inexpensive home-treatment is prescribed whereby delicate, feminine complaints may be promptly alleviated and cured. Dr. Pierce's Favorite Prescription is the only proprietary medicine in the world designed for this special purpose by a regular physician—an educated, experienced expert.

Miss Cora L. Russell, of Leemont, Accomac Co., Va., in a letter to Dr. Pierce, says: "From April, 1896, until the following October, I suffered severely from painful menstruation. For about twelve hours before the appearance of the menses I would feel giddy, have a severe headache, pain in my back, in fact I felt as if every bone in my body was breaking. Nothing did me any good. I wrote to Dr. Pierce and he recommended his 'Favorite Prescription,' and after using three bottles of it I am glad to say I am cured."

Dr. HAYES, Buffalo, N. Y. **ASTHMA** Cured to Stay Cured

The Dairy.

We have a complete Dairy and Farm Creamery in constant operation on the Experiment Farm at Climax, Mich. This is personally conducted by J. H. Brown. All dairy correspondence should be sent to Climax, Mich.

THE EDITOR'S DAIRY NOTES.

A HANDY COW STABLE.

In order to have cows thrive well one must have a warm place for them in the winter. Last year we erected a carriage house and a cow stable.

We had to build the carriage house between the barn and the granary and the cow stable on to the granary, so we laid our plans as in the figure.

In going from the house to the stable we can pass through the carriage house, which is much handier than traveling around the barn. In the figure, A, A indicate rolling doors, H, H are manure doors, W, W windows; M, M are mangers and S, S are steps.

At D is a low door in the alley to keep the cows from running in. The box stall, which can be divided, could be used for calves or young cattle.

The bins in the granary are handy about getting meal for the cattle. The stable being on the east side makes it warm in winter, and the windows being few the flies will not bother much in the summer.

Jackson Co., Mich. CHAS. GOLDSMITH.

We have no doubt that your arrangement is an excellent one, but we would like to make a suggestion that, to us, seems very important.

MORE WINDOWS NEEDED.

The great fault with many cow stables is the lack of a sufficient number of windows to let in the sunlight. This is the trouble with our old stables, and we hope to remedy the defect in the near future.

MORE AIR SPACE NEEDED.

The average dairyman does not fully appreciate the fact that, where a number of cows are herded together in a stable, and given more or less close confinement, the number of cubic feet of air space for each animal is often very limited.

This compels the breathing over and over of air highly charged with carbonic acid gas and other impurities. Where few windows are utilized, and little or no arrangement made for ventilation flues or shafts, we find a greater tendency to tuberculosis and kindred diseases, other conditions being equal.

SUNLIGHT DESTROYS DISEASE GERMS.

Along with cleanliness in other details, there is nothing like plenty of sunlight to kill disease germs, which lurk in all stables. With these points under consideration we would advise friend Goldsmith to put in two more windows on the east side of the stable, back of the cows.

These two windows might take the place of the two manure doors H, H. The four windows would furnish plenty of sunlight every pleasant day, except during the middle of the day.

SHADE AND SCREEN THE WINDOWS.

During the summer these windows could be shaded, or opened and screened, as required. In the winter time the windows would not make the stable any colder, especially if double lighted, as the stable is nicely protected from the cold west winds.

This stable and yard has an ideal protection, and we are well pleased with the general plan. Do not be afraid to put in more windows; the more the better, to a certain extent.

To prevent animal heat from passing through the glass by radiation, during severely cold nights, we would have heavy canvas curtains strung on wire, and draw these across the windows, at chow time, every night.

CURTAINS AND SCREENS VALUABLE IN FLY TIME.

When flies come, during hot weather, a wire fly screen over each window is a valuable adjunct to cow comfort. If the stable is closely boarded and screen doors used, the owner of a dozen good cows will never go without them after one season's use. This is what we are planning for in the ideal stable we have in our mind's eye.

A darkened stable, well screened from flies, is a luxury for cows during the hottest portion of the day. If allowed the opportunity, each cow will rush into such a harbor of refuge to escape the heat and flies, after a few hours in the pasture during the forenoon, if she has good cow sense.

NOCTURNAL ROAMING THROUGH PASTURES GREEN.

Under above conditions we would arrange to pasture the cows at night, during hot weather, especially if the

pasture was not too far from the stable.

Our cows last summer were let out during the nights, and usually were back to the yard at milking time in the morning. They knew there would be some bran and a pinch of salt waiting in the mangers for them, if nothing more.

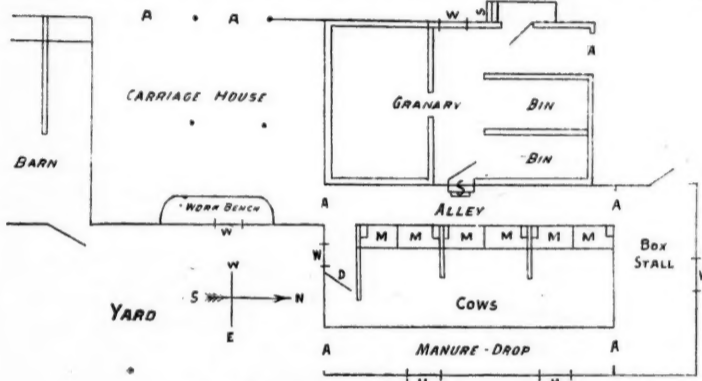
We like the plan of pasturing the cows nights during hot weather, and shall follow the practice more or less this coming season, although the permanent pasture is a good half mile from the stables.

VENTILATION OF STABLES.

This is very important. In cold weather, and whenever a draft of cold or damp air would chill the cows by passing across the stable from windows diametrically opposite, over the backs of the animals, the windows should not be entirely depended on to secure ventilation.

A better plan is to make air shafts for this purpose. Four boards, 12 inches wide, and of the proper length, make a good square shaft.

These should be placed back of the manure gutter, in front of Coleman's plan, and next to the outside wall. The lower end should be about 15 to 18



A HANDY COW STABLE.

inches above the floor, with a slide to regulate the draft.

It is our opinion that these air shafts should extend through the roof. A sketch of a good ventilating arrangement will be given in a future issue.

STABLE FLOORS.

Were we to build a new stable this season we should make a clay floor. For cow comfort and cheapness, we have seen no other floor that can beat the clay bottom we have in our old stables.

These floors are dry and hard, and with the water-tight manure gutters, with wide heel plank for the cow's hind feet, every particle of both liquid and solid manure is saved and hauled out to the fields.

WHY WE PREFER CLAY FLOORS.

We like the cement floors very much, and also a good tight plank floor, well matched. But our principal advocacy of the clay floor is on account of its cheapness and the ease and quickness of its construction.

More than this, we know a clay floor is better for the feet of the animals and that the bedding will not slip out so easily from under their bodies. Clay floors can be used with any kind of stall, stanchion or tie.

For the Michigan Farmer.

AGAIN THE RECORDS OF THE BREEDS.

In The Farmer of March 5th., page 189, there is an article headed, "Records of the Breeds," by H. H. Hinds, of Montcalm Co., in which part of the figures appear to me to be false. As I have not seen them corrected, if it is not out of order I will correct them. He says Merry Maiden gave 965 lbs. milk, 54.65 lbs butter fat which is equal to 68.31 lbs., 80 per cent butter. How does he get 68.31 from 54.65 butter fat?

He says Kittie Clay 4th gave 1593 lbs milk, 52 lbs fat, and 65 lbs 80 per cent butter. It seems to me that 52 with one-fifth added is 62.4 instead of 65.

He also says Stoke Pogis Regina gave 1,012 1/4 lbs milk, with 49.4 lbs fat and 61.75 lbs of 80 per cent butter. How does he get 61.75 lbs of 80 per cent butter from 49.4 lbs of butter fat?

Mr. Hinds says the reader will be left to judge as to which of these three cows, in the dairy of a man who is in business for profit, would be likely to show up the best from year to year considering the individual animal, her work and her produce. It seems to me he does not give figures enough to judge by.

How many pounds of cheese were

made by Merry Maiden, and what was her net profit in the cheese test. How many pounds of cheese by Kittie Clay 4th, and what was her net profit in the cheese test? How many pounds of butter fat did Merry Maiden make and what was her net profit in the 90-day butter test? How many pounds of butter fat did Kittie Clay 4th make and what was her net profit in the 90-day butter test?

From Mr. Hinds' figures, Merry Maiden's milk contained 15 per cent total solids, while the milk of Kittie Clay 4th contained but 12.11 per cent. Does not Michigan law say milk that contains less than 12 1/2 per cent of total solids shall be considered adulterated? Also, according to Mr. Hinds, Merry Maiden gave 2.65 pounds more butter fat, at 87 cents less cost, than Kittie Clay 4th in the same length of time.

If Mr. Hinds will tell us what the cows did in four and a half months we can judge better than where the figures are only given for one month. Also what was the gain in live weight and net profit of Waterloo Daisy in the cheese test? What was the gain in weight and net profit of Nora in the cheese test? How much was the gain

or other. Wm. Crozier, the great Long Island farmer, once said: "Everything must have a mother, and manure is the mother of the farm crop." In the production of manure and at the same time pay a fair income, the cow is a valuable factor.

The question which puzzles the farmer remotely located is, "What shall be done with the product of the cow, so as to secure that desired income?" There is a growing demand for good butter, but the making of butter is a science and an art. The work is usually done by the farmer's wife who, through the long summer months, has enough to do without the drudgery of caring for milk and making butter. The conveniences at hand for making butter on the average farm are very few, and, considering the cost of a good outfit, the work connected therewith and the price of butter during the summer months, butter-making on the farm yields but little profit.

The co-operative cheese factory, however, affords an opportunity of securing the full value of the milk at slight expense and at the same time relieves the family of much hard work. We have tried the plan and are highly pleased with the result. In our next article we will give one year's experience on the co-operative plan.

F. E. IMMEL.

(We hope our brother dairymen will read what friendimmel has to say about the co-operative plan.)

We also wish to hear from some of the cheesemakers of Michigan. They are not saying much, though no doubt they are saw—making cheese.—Ed.)

When writing advertisers please mention Michigan Farmer.

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THE MICHIGAN FARMER

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DETROIT, SATURDAY, MAY 14, 1898.

This paper is entered at the Detroit Postoffice as second class matter.

Those of our readers who have wool to market will find it of much advantage to tie the fleeces with small hard twine. The use of Sisal, or binder twine, is a source of great annoyance to manufacturers, as the loose fibres get mixed with the wool, and are very difficult to get out of the fleeces. Wool done up with this soft twine is sure to be docked when purchased, and the safest way is to discard its use altogether.

Many of the readers of The Farmer well remember John Dimon, once a resident of this city, and for years well known as a breeder and dealer in fine live stock, and also as a writer upon agricultural and live stock topics. We have just learned of his death at East Hartford, Conn., after a long and painful illness. He was born in Bristol, Rhode Island, in 1828. Mr. Dimon was a man of earnest convictions and strong integrity, and highly respected by his friends and acquaintances.

The result of the trial of Henry N. Anderson and John J. Foster, directors of the failed Greenville National bank, for neglecting the duties of their office, and allowing the president, Le Roy Moore, to wreck the bank, will exercise a restraining influence upon men accepting such offices and then neglecting to perform their duties. The United States Court rendered judgment against these two men for \$62,594, and the creditors of the bank were empowered to enforce payment.

The Metal Worker, published in New York city, last week printed figures showing the production of tin-plate in the United States during the last half of 1897. The figures given show a remarkable growth in the manufacture of American tin-plate. The total output of finished tin-plate made in six months ended December 31, 1897, amounted to 322,205,672 pounds, an increase of nearly 25 per cent over the first half of the year. The total production of tin plate for the calendar year 1897 is shown to have been 574,759,628 pounds, an increase of 205,520,832 pounds. When it is remembered that this industry only dates from 1892, and that up to that time the United States had been sending from \$60,000,000 to \$70,000,000 annually to foreign countries for this staple, the great development of this industry affords just cause for congratulation.

THE MAIZE PROPAGANDA.

In another column we print a letter from the Secretary of "the Maize Propaganda," replying to the criticisms on the objects of that association contained in an editorial in last issue of The Farmer. We have gone carefully over the statements and explanations made by the Secretary in his communication, and, after giving them due consideration, do not feel that they remove the objections urged against the proposed line of work which the "propaganda" has marked out for itself. The statement of what the executive committee proposed to do is all right so far as it goes. But it is the result of such work which will determine its value to the farmers of the United States, not what the committee proposes. The proposition to export corn meal instead of whole corn is good, but the foreign buyer is the party who will determine what he wants—not the "propaganda." To show the difficulty of bringing foreign buyers to the same opinion as holders of grain in the United States, let the Secretary hunt up the record of American exports of wheat flour and wheat. It has taken 25 years of hard labor to bring the exports of flour up to their present magnitude. The foreign buyer wanted wheat, not flour, and it was only by the most systematic effort, the lowering of the cost of milling to the ultimate point by the use of the most improved machinery, that the exporters of American flour have been enabled to increase its volume. The foreigner was awake to the advantages of having the wheat ground in his own country, through the employment it gave to labor and capital and the advantage to the farmer of having the by-products produced within easy reach so as to save cost. Hence foreign governments discourage imports of flour by levying discriminating duties upon it, as they would assuredly do on corn meal under the conditions contemplated by the "propaganda." But the work of the propaganda would assuredly tend to greatly extend the cultivation of corn, as well as its consumption, and no power on earth could hold up the value of an exported article under such circumstances.

We still insist that corn meal exports, which are practically unknown at present, would be at the expense of the exports of flour, which are far more conducive to the financial prosperity of American farmers than changing them to corn meal would be.

The suggestion that corn flour would be mixed with wheat flour to cheapen it, we regard as an argument in favor of adulterating American flour, which would surely result in immense injury to the reputation of the American product, and immense losses to the wheat growers and the milling interests of the country. No matter what the "propaganda" advocates, the adulteration suggested will not stop at the line it has marked out. The party who first introduced oleomargarine to the public as a cheap substitute for butter, available to the class not able to purchase the pure article, never intended to injure the dairy interests by having it sold as butter, but it has cost the dairy interests of this country millions of dollars annually through its fraudulent sale. That very suggestion of adulteration should be sufficient to warn farmers that the "propaganda" is likely to work great harm to their interests while attempting to do a little good.

Yes, we object to exporting any more wheat than possible if we can get foreign buyers to take flour, and they are taking more flour every year, to the advantage of the farmer, the dairyman, the miller, and the allied inter-

ests, with the employees of each, which altogether make up a great many people whose well-being benefits the entire country.

Now, a word about "restricted markets and low prices." It is not many months ago, that Mr. Snow, secretary of the "propaganda," collected and published a mass of statistics showing that corn could be raised for six cents per bushel. We believed those figures to be grossly inaccurate and so said at the time they were published. It is evident Mr. Snow is now convinced that those figures were wholly erroneous, as he talks now about low prices when corn is worth 30 cents per bushel on the farm, or five times what he said it cost to raise it! If the farmer could get five times the cost of production for what he produces, he would certainly never complain of low prices. Why should Mr. Snow complain for him if his six-cent figures were correct.

We believed Mr. Snow was doing farmers a bad turn when he published such figures. We believe he will do them still greater injury through his advocacy of flour adulteration, and the attempt to supplant the exports of flour with exports of corn meal. This is an editorial opinion, as Mr. Snow says, but it is backed up by many clear-headed farmers and business men with whom we have discussed the subject.

IT LOOKS LIKE ROBBERY.

The encampment of State troops at Island Lake, where they are being inspected, drilled and mustered into the service of the United States, has now been in operation over two weeks. During that time from 2,500 to 3,000 men have been drawing pay from the State at the rate of \$2 per day, from which they must furnish their own rations. It seems the State, or its officials, have undertaken to provide these rations, and a part of the soldier's pay, amounting to 75 cents per day, is deducted to pay for them. When it is remembered that these rations are very similar to those furnished by the United States at the rate of 25 cents per day, after they have been shipped to the extreme southern part of the continent, it looks as if charging these young men at Island Lake three times that amount was very close to simple robbery. A comparison of the charge with what hotels and restaurants ask for much better, or at least more varied, food, in this city, shows that the soldiers are paying double as much for uncooked rations than better ones can be had for in Detroit, cooked and served in fair style. The rations provided at Island Lake, according to wholesale prices in this city, will not foot up 35 cents per head per day, and the question naturally arises, who gets the difference?

Many of these young men left excellent situations to enlist at the call of the government. The State is paying them generously while they are under its control. Why should they be swindled out of a part of the money the State pays them? Whose fault is it that such a state of affairs exists? We call Governor Pingree's attention to this gross abuse, believing that he will at once take means to find out who is responsible, and put an end to a most scandalous piece of business.

The French government has placed a duty of \$40 per head on all foreign horses. Of course this principally strikes at American horses, as the heaviest importations are from this country. It is a good joke when it is called to mind that the Americans have paid millions of dollars to French breeders for Percherons and French Coaches, and that this government expected all horses imported for breeding purposes, if of an acknowledged breed, from paying any duty whatever.

LOANING MONEY TO FARMERS.

For the past two years the French government has had under consideration a number of methods intended to secure to the agriculturists of that country the privilege of borrowing money at a low rate of interest and for extended periods. A letter just received from our Paris correspondent announces that such an arrangement has finally been perfected, and explains the details of the method adopted. It is given herewith:

The new law on the agricultural warrants has been promulgated, so the farmer can now pledge his products and without much trouble or expense. With that facility the agricultural syndicate and the quasi-state rural bank loaning money at low interest and for 15 months, the farmers of France ought to commence to feel related in advance to the elect. The warrant law is as simple as it is effective. It rests upon two bases: first, the local resident official magistrate of the canton. The latter is a territorial division of France, comprising several communes; there are 2,871 cantons in France, and 36,000 communes. The second basis is making the farmer himself the custodian of his products that serve as the pledge to the lender of the money, and making him personally and criminally responsible for the guardianship of the goods. There is the feature of the Russian law. But the farmer can claim no payment for his watching duty. Loans will be granted on all farm produce, and the manipulation of the affair will be centralized in the canton court house; there the applicant must register his warrant, and all parties interested legally in the property will be legally advised and without cost. The warrant will describe the products reserved as security, their value, and the total of the loan required; also, if the products be insured, or in any way mortgaged. A clean bill of responsibility, having been certified for the warrant, the latter—as in ordinary trade, becomes a negotiable paper, that any bank or syndicate can handle. The holder of the warrant is the pro tem proprietor of the products it covers. In case of nonpayment of the loan when due, the lender after ten days can simply sell the produce, and any surplus will be given to the original owner. The latter can reimburse his loan before it is due, and be paid a proportionate drawback of interest. In case of any willful infractions of responsibility, the law inflicts its sentences. The whole history of the loan and its phases are registered in the Cantonal court and open to those authorized to examine.

The scheme as outlined above seems well calculated to accomplish the desired object, and the result cannot help but be beneficial to French agriculturists. Such a method, however, cannot be considered in the United States, as this government has not the power, nor would the people be willing to have one class favored while the others had to depend upon their own efforts. But there is no reason why American farmers cannot adopt some of the methods detailed above in their individual capacity and to their personal benefit. There is no doubt but that loans to farmers upon their products, as well as upon their land, are among the very safest which can be made, and that therefore, as a class, farmers should be able to secure such loans as they require upon the very best terms. To do this, however, they must take pains to have their financial ability to make good their promises fully understood, and back of this should stand an unimpeachable record of personal integrity upon the part of the man himself. In other words, he must have good credit. That term, so much used among business men, means a good deal—personal integrity, business ability, and a solvent financial condition. Many farmers have these, and yet when they become borrowers are compelled to pay high rates of interest simply because they have not fully explained to the lender the position in which they stand.

With the steady growth of capital, and the competition between bankers and private individuals to secure good investments for their funds, which has resulted in cutting down interest charges very materially, it is within bounds to say farmers in this and neighboring States are paying too high rates for the money they borrow. A man who loans money in Ohio and Michigan told us the past week that he was getting 8 per cent on most of his loans. Under present conditions no farmer should be paying more than 6 per cent, and he would not be if he would establish his credit, as business

MICHIGAN FARMER WAR MAP.



Map of the widely extended "seat of war" and of the countries involved or interested. It is drawn on "Mercator's projection," but Cuba and adjacent islands are given at about three times proper size, while the Pacific ocean is given at about one-third proper size.—Drawn and engraved for THE MICHIGAN FARMER.

men do, through the endorsement of his bank or his neighbors.

Good credit to-day is worth within 6 per cent of capital. The man with good credit can get capital for that amount to the extent of his credit. This has been the great secret of success with nearly every business man. He knew how to use capital so it paid him a profit over its cost, and his promptness in meeting his obligations gave him good credit so he could secure the capital he required at a low rate of interest.

With the abundant capital now offering, rural banks could be established upon the avowed basis of loaning to farmers upon their products, and if the business was well organized, the loans judiciously made upon proper guarantees, there is no doubt it would pay investors who furnished the necessary capital, and certainly it would be a great aid to many farmers who may desire to secure small loans to enable them to engage in enterprises for which they have not the necessary capital, or to carry crops for which the market promised improved values, or for which there was little or no demand at a time. There is nothing so conducive to enterprise, progress and development as abundant capital at reasonable rates of interest.

Correction.—On page 308, April 16th, Michigan Farmer, in "Home Cheese-making," read: "The Gouda cheese is about three inches thick and eight inches in diameter." A portion of this sentence was omitted by the compositor, and it read that the cheese was three inches in diameter.

From the number of inquiries so far received asking for particulars regarding The Michigan Farmer Harvest Excursion, our readers must be greatly pleased with the idea. In a few days we shall have circulars printed, giving full details of the proposed trip, which will be mailed to all applicants.

The U. S. Supreme Court, in a case decided on Monday last, held that the Iowa law forbidding the sale of liquors in the State, and making it a crime to transport them, was unconstitutional, as it was an interference with interstate commerce.

Robert Lindbloom, a leading operator on the Chicago Board of Trade, who has been a persistent "bear" in the grain markets, was compelled to assign Monday with liabilities estimated at \$225,000. While many speculators will make money from the advance in wheat, it must be at the expense of those who were on the other side. There is no property created through speculation. The country at large is no better off because some speculators have made money at the expense of others. This only means the transference of a certain amount

of wealth from one set of men to another. The wealth has not increased by the transfer. The wheat sold abroad at enhanced values is the only part of the deal which will inure to the benefit of the country generally.

A number of the wives of prominent public men, in view of the ill-concealed sympathy of the French people for the Spaniards in the present struggle, and the open hostility with which they regard Americans, have entered into an association binding themselves not to purchase or wear anything of French manufacture. As about \$56,000,000 were paid France last year for goods imported into this country, most of the amount being for articles of wearing apparel for women, if the association holds together it will create a panic among French milliners and dress-makers. These two classes have long regarded Americans as their best customers, and have charged outrageous prices for their wares. Every American woman should sympathize with this movement to emancipate American women from paying tribute any longer to these French extortionists.

THE GEOGRAPHY AND FINANCES OF THE WAR.

The map on this page gives some idea of the principal countries and points of special interest just now in connection with the Spanish-American war. Please read the note immediately beneath the map and bear it constantly in mind. Cuba was enlarged from the general scale of the map in order to show localities on the island, while the Pacific ocean was reduced in order to bring it into our limits. The following simple table gives some adequate idea of the geographical and financial facts relating to countries chiefly involved:

SPAIN AND THE UNITED STATES.

Population of each.—

Spain.....17,500,000

United States.....74,000,000

Area of each.—

Spain.....196,000 sq. m.

United States.....3,603,000 sq. m.

Wealth of each.—

Spain.....\$7,965,000,000

United States.....\$45,000,000,000

Annual Exports and Imports.—

Spain.....\$300,000,000

United States.....\$1,633,000,000

Annual Revenues.—

Spain.....\$150,000,000

United States.....\$320,000,000

CUBA AND THE PHILIPPINE ISLANDS.

Population of each.—

Cuba.....1,550,000

Philippine Islands.....9,500,000

Area of each.—

Cuba.....43,000 sq. m.

Philippine Islands.....114,000 sq. m.

Commerce of each.—

Cuba.....\$30,000,000

Philippine Islands.....\$60,000,000

It thus appears that our population

is (in round numbers) 4 times that of

Spain; our area, 18 times; our wealth,

6 times; our commerce more than 5

times, and our revenues more than

twice as great as hers.

In like manner it will be seen from

the latter part of above that the population

of the Philippines is 6 times as great as that of Cuba; their area,

nearly 3 times, and their commerce

more than twice as great. Their chief town, Manila, has 150,000 inhabitants,

while Havana, the chief town in Cuba, has some 250,000 inhabitants.

As regards debt, our commerce in a single year would pay our national

debt, while it would take Spain's entire commerce more than five years to pay her national debt.

As to the power of our navy, the comparison cannot be so exactly made, but it seems within limit to say that on the whole in tonnage, speed and in armament our navy far out-ranks that of Spain, while in skill in maneuvering a squadron and in accuracy and rapidity in aiming and firing all sizes of cannon our officers and men seem almost infinitely superior to theirs. It is "Yankee" ingenuity and skill and careful practice versus Spanish lack on all these points. At Manila harbor, for example, our naval armament did not greatly exceed that of their war ships and forts combined, and yet, as it now seems, our "Yankee" ingenuity, skill, accuracy and pluck almost blew and burned their entire squadron out of existence with no loss in dead and little loss in wounded or in material disaster to our squadron.

At present the end seems neither doubtful nor far away, especially when we consider the home strife and discontent in Spain. Immense superiority in area, population, wealth, army, navy, skill, and in real courage and endurance, seem almost inevitably sure to win. The victory, it is felt, should be marked with moderation. The settlement should tell for human freedom and higher civilization. And all Europe and all the world should be forced to say that our war was begun and ended not for glory or selfish gain but to protect humanity, and to advance liberty and civilization.

THE MAIZE PROPAGANDA.

To the Editor of The Michigan Farmer:

The editorial in your issue of May 7th, voicing opposition to the plans of the American Maize Propaganda, is in part based upon misconception of what those plans are, and I believe the premises for the rest of the opposition are not well founded. The encouragement of the exportation of corn in the grain for use in meat and dairy production is not one of our objects. The first meeting of the executive committee settled that line of policy, and our prospectus says that in addition to corn food products "it will also work to increase foreign trade in meats, dairy products, and other secondary forms of corn, but does not believe in exporting corn in the shape of grain." In other words, our object is to export corn in its last final manufactured form, thus securing to the country both producer's and manufacturer's profit.

You object that a larger consumption of corn abroad would mean a smaller use of wheat flour. Wheat flour is not the standard breadstuff of Europe, and still less of Asia. Rye and the cheaper cereals form the staple. Corn will appeal to consumers because of its cheapness, and will, therefore, come into competition with rye and other cereals which we do not export. People who can now afford to eat wheat will continue to do so. As a matter of fact the introduction abroad of corn flour will tend to create a wider market for wheat flour, because when blended with wheat flour it will reach a class of consumers that now do not eat any wheat flour, but subsist on rye. It must be distinctly understood that while we advocate the use of corn flour we are strictly in line with the public sentiment which demands that it shall be used by the consumer with full knowledge of what he is getting.

Your next objection is that if less flour were exported there would be less of bran and by-products for the use of the dairyman and stock-feeder. As I have already pointed out, there is no competition between wheat flour and corn flour, so far as the foreign market is concerned. That removes the fear of any less bran production. In addition, let me point out that the by-product from the manufacture of corn flour is greater and its constituent elements just as valuable as that from wheat. The germ and hull is separated from the starchy portion, and when ground together furnishes a stock food second in value to none. Right here may I suggest that as less than one-half of our wheat export is in the shape of flour, in order to be consistent with your argument you should object to our exportation this year of some 100,000,000 bushels of wheat in the grain, on the ground that the by-products are thus sent out of the country to the detriment of stock-feeders and dairymen.

Again, you object that a higher price of corn might induce other countries to grow it and become our competitors. Is that a valid reason for preferring to wallow along with a restricted market and low prices? We now have practically a monopoly in its production, and no other country has climatic conditions so favorable for the crop as has ours. And, by the way, if some of the "millions of acres now sown to wheat and rye" in other countries should, as you fear, be planted to corn in order to take advantage of any increased market for corn, may I ask what the effect would be upon the American wheat grower whom you are assuming to champion?

Now having pointed out what seems to me the error in your reasoning, let me briefly state why, in my opinion, the most important need of American agriculture is a larger market for corn.

It is the greatest crop in our agriculture. Under present conditions our annual crop, barring crop failure, is larger than the consumptive demand. With better agricultural methods our rate of acre yield is steadily increasing, so that our present surplus of production is likely to increase rather than decrease. After making all the meat and dairy product for which we have a paying market, there is a surplus of corn that forces prices to a very low level. We believe that this surplus can be absorbed abroad in the shape of food products, if the virtues of corn as food be appreciated.

A little fragment of modern trade records will show that our belief is well founded. In 1891 Secretary Rusk sent Col. C. J. Murphy to Germany to preach the use of corn. Our corn trade with Germany in the four years preceding and the four years following his work show what can be done.

EXPORTS TO GERMANY.

	Bushels.	Value.	Price per bu.
1888-91.....	20,710,745	\$ 9,617,414	.46
1892-95.....	33,688,503	17,287,984	.51

Following the work of one man in one country we increased our exports of corn 64 per cent, with a rise in the price paid for it of 11 per cent. Such a result should outweigh any number of editorial predictions of "failure."

Truly yours,

B. W. SNOW, Secretary.

COMPLETE IN EVERY RESPECT.

Millington, Feb. 1st, 1898.

Publishers Michigan Farmer:

Sewing machine to hand about two months ago, but thought I would not write you until I had given it a fair trial, which I have done, and find it complete in every respect. Thanking you for your kindness, I remain,

Yours truly,

MRS. ARCHIE BELL.

The Household.

CONDUCTED BY MRS. ELLA E. ROCKWOOD.

We should be pleased to have any of our readers who take an interest in household topics, send in their views and opinions upon any subject which is under discussion, or which they wish discussed. The invitation is general, and we hope to see it accepted by many. Address all letters for The Household to Mrs. Ella E. Rockwood, Flint, Mich.

THE LIFE SCHOOL.

My little boy came from his school to-day
With his heart in a flurry of glee;
"Oh, papa! They've taken our pencils
away
And I'm writing with ink!" said he.
And his breast is filled with a manly
pride,
For it joys him much to think
He has laid his pencil and slate aside
And is writing his words with ink.

Oh, innocent child! Could you guess the
truth
You would ask of the years to stay
Mid the slate-and-pencil cares of youth
That a tear will wash away;
For out in the great, big world of men
The wrongs we may do or think
Can never be blotted out again,
For we write them all in ink.
—L. A. W. Bulletin.

HOME CHATS WITH FARMERS' WIVES.

THE HIRED GIRL.

At this season of the year in many farm houses the new hired girl has recently been installed and become a member of the family. It is usually something of a trial to both mistress and maid and some little time may elapse before each settles down with the feeling that things are moving smoothly along accustomed channels.

To the new girl everything is strange. Different methods of doing the work, different manner of cooking, (for no two households can be found where this is done exactly the same), different tastes to cater to, even the oven of the cook stove must be studied and its peculiarities learned, for what is more exasperating than trying to bake in an oven with the baking qualities of which one is unfamiliar? I think the new girl is at great disadvantage under such circumstances, and the mistress should not be too hasty in passing judgment, but wait until she has had time to adjust herself to changed conditions before firmly deciding that she is not going to suit.

It is a firm conviction of mine that the fault as frequently lies with the employer as with the employed in case of dissatisfaction. We are apt to be too exacting when it comes to having some one to do our work for us. We expect too much, and if a girl falls short of absolute perfection we dwell upon her shortcomings and forget all about her good qualities, overlooking them entirely. To be sure there are certain things which are essential, such as truthfulness, honesty, cleanliness, traits which are of actually more importance in the farmer's family than that she should be a good cook, since the house mistress usually prefers to do most of the cooking herself anyway. With us the hired girl is a helper—we do not expect her to do all the work. Indeed it would be impossible for one to do this unaided upon a large farm. Most farmers' wives work fully as hard as the hired girl, and sometimes a good deal harder.

As a rule a good mistress has little trouble with her maids. The ones who have the most complaint to make are those who are exacting, fault-finding, hard to please. Of course there are exceptions, but the average girl will respond to kindness and be willing to do the best she knows how.

Not long since a friend was telling me of a lady who is noted in her locality for her ability to procure and retain good help in her kitchen. Said she: "Mrs. G. takes a girl from among farmers' or villagers' daughters and makes her at once one of the family. She is introduced to guests, sits in the parlor and participates in conversation, goes out with the family to church or to entertainments—in fact is made to have such a good time that she doesn't want to leave. In return she takes an interest in her employer's work, tries hard to please, and the result is satisfactory all around." This lady is never troubled to get help. When one is established she stays until she marries. The above is given for the benefit of any who may have difficulty in procuring and keeping good help. It is a good thing to put ourselves in the hired girl's place sometimes. It may be the case would not look so one-sided as it sometimes does could the girl's view of

it be taken into consideration by her mistress.

Yes, I know there is fault on the other side. I know of girls who are great trials, to say the least. A dear old lady living near me is invariably lenient toward her girls and her kindness is frequently imposed upon, too. She is obliged by physical infirmities to have help the year around and some of the girls whom she employs take advantage of this fact to do about as they please. She endures a great deal rather than make any complaint, because of her helplessness, for, as she says, "If it should get out that I am a hard woman to work for I couldn't get help at all."

Well, everybody has trials in this world! Those who have no help sometimes think those who do are to be envied, while at the same time those very ones are envying the ones who have none. And so it goes!

THE ALMIGHTY DOLLAR THE BARRIER.

When I read Elizabeth's article on "Stuck-Up People" I smiled to myself, thinking what a hornet's nest she was likely to stir up. No woman of intelligence and spirit enjoys being told that she is not a fit companion for any other woman, and I quite agree with Katherine Kean that it is the almighty dollar that makes the impassable gulf between people nine times out of ten. And I think people who attain so much knowledge and so-called "culture" that they can find no pleasure in conversing with those of ordinary intelligence, or those less fortunate than themselves in point of fortune, are simply snobs, and are not worth a second thought.

I have in mind one case in particular where I once visited. The lady had a neighbor next door who belonged to that superior order of beings known as "cultured." She knew just exactly how to conduct a stylish tea party, just how many different knives, forks and spoons to use at a "dinner," and when to use them. Had a very soft voice—I see that is one of Elizabeth's requisites of a cultured woman—and perfect manners. The lady where I visited was exceedingly plain, and had to work hard for her daily bread, but good, kind and respectable, and belonged to the same church as her neighbor, yet that neighbor would not be seen walking to or from church or anywhere on the street with her but she would come across to the kitchen nearly every morning and visit an hour or two, and borrow flatirons and cake tins, and even victuals, from the "ignorant, ill-bred" woman, and it did not seem to inconvenience her in the least. That is only one of many such cases I could mention. A plain, ordinary farmer's wife ought, I suppose, to be willing to walk four blocks to receive a smile and nod of recognition from such a paragon, and to obtain a frigid hand-shake would be bliss unutterable. Does it follow, because one has—by being given better opportunities—gained more knowledge of certain subjects, and, having more money, can array themselves in finer garments and keep their hands soft and cultivate their voice, that they are made of finer clay? Never! And let us all remember that the greatest and best of America's men and women were the most humble and unassuming. Would Abraham Lincoln have been ashamed to speak to an acquaintance because he was poor and "uncultured"? Would Harriet Beecher Stowe have given a sister woman the "cut direct" for this cause? I think not. It matters not so much what we know or do as what we are. "As a man thinketh, so is he." How few remember that when choosing their friends and companions. Fine clothes and a few paltry accomplishments entirely outshine virtue, kindness and purity if hidden beneath a plain face and gown.

I had been thinking pretty strongly on this subject a few days ago; in fact so strongly that it followed me in my sleep, and I dreamed a very strange dream. I will close this letter by telling it. I dreamed that I stood outside the "pearly gates," from which came sounds of great confusion, tramping of many feet and strains of music. St. Peter came to the gate occasionally and looked out as if expecting some one. At last a bell tinkled away in the distance, the gates swung wide, and out dashed a chariot drawn by four magnificent white horses. It disappeared in the mist that seemed to shut off my vision in all directions, but presently it returned bearing a woman, tall and fair and beautifully dressed. Every ruffle and tuck was "just so," every stitch in place. She wore an expres-

sion of high-bred ease, and the splendors of heaven did not awe her in the least. She descended gracefully from the chariot, ordered St. Peter to send up her trunks, and disappeared as the gates swung to with a crash. I was about to turn away, when a form struggling through the mist again attracted my attention, and presently I saw slowly and uncertainly approaching the gate another woman, but how different this one from the other. A face hopelessly plain, hands rough and callused with work, a dress at least two seasons behind the styles, and a hat even more antiquated. As she gave a timid knock St. Peter looked out—only opening the gate a couple of inches to do so. He inquired who she was, to which she replied that she was the wife of Farmer Jacob Staples. He asked if she could speak French and German, play the piano and sing. Did she belong to the "Blue Circle" and the "Emerson Club?" and lastly could she ride a wheel? To all of which she was obliged to answer, No. "Then," said St. Peter, "just step around to the back door; this is the Cultured People Department, and I fear you would not prove a congenial companion for them." The woman turned sadly down the path that led to the rear door. The cold mist rolled up and hid the gate from view. I awoke. 'Twas but a dream, and it is said dreams go by contraries—but I don't know.

NELLIE LOUISE REED.

SEVERAL QUERIES ANSWERED.

A correspondent who wishes to be known as Addie asks where the health corsets may be obtained, those that button in front, have removable stays and hose and skirt supporter. She also asks what to feed a baby that isn't weaned.

To the first query we would say that the Ferris corset waist is probably the one referred to. It is on sale at nearly all dry goods stores; price, \$1 to \$2. Children's sizes, 25 to 50 cents.

As to the second question, the subject has been freely discussed in these columns during the past winter, and a formula for preparing a very good food for babies was published as late as April 30, page 353. It is well to consult one's physician in such cases, and while it is true that a physician is not infallible, still one will be apt to get reliable information from such a source.

In response to Mr. Voorhees' article we have received such a host of replies from girls, young and old, who love the farm and a country life that it would require more space than we have at our disposal to publish them all. Suffice it to say that these girls are scattered all over the State of Michigan and are most emphatic in their expressions of satisfaction with farm life. Mr. Voorhees must surely be convinced by this time that there are many young women who prefer the quiet of a rural existence to the attractions which the city affords.

KEZIAH'S FIRST RAG CARPET.

Ten years had passed, and there were four Kedzie juniors in Kizzie's family. All this while there were bare floors in the home. Carpets were to the pioneers an expensive luxury. Kendrick had been owing a trifle on that span of horses—a mere trifle—but twenty-five or forty dollars in money was hard to raise from a new farm those days. Keziah had all along purposed to make a rag carpet. But with the care of children and the frequent appearance of the new baby, besides the housework for a family, the work and laundry for workmen in field and fallow—oh, those logging clothes!—she failed to find the time for the laborious work of tearing each rag quite through and piecing together again. "It's nothing when you know how," is trite as true. Keziah had to learn under unfavorable conditions. So, for long months, that lengthened into years, she purposed in vain. At length the onerous task was bravely begun. Everything that promised to "fill in" was utilized. Oh, the painstaking, laborious methods! Old pants in profusion, old coats, what not, were duly washed and ripped. Linings were boiled in lye and bleached.

The smallest rags were torn clear through, or if new and stout, cut round and round. When sewed they were wound in immense balls that broke in skelning for the dye.

Cotton rags were made to compare in size with the heavy pant cloth utilized. Later Kizzie became aware the heavy cloth would cut the warp, mak-

ing holes in the carpet; hence heavy, hard cloth should be excluded. These coarse rags made her carpet too heavy—some two and one-half pounds per yard. A weaver counseled to purchase fine balls of wrapping twine for warp. Stout, but shrank in dyeing, becoming coarser. Those bleached linings were dyed in a solution of hemlock bark, or with copperas and lye. The blue? Keziah knew no other method than the old-fashioned indigo. In her traditional theory everything dyed must be thoroughly "scoured" to remove the odor or caustic effects of the mordant. So, after laboriously dyeing with hemlock, copperas and lye, etc., everything was so thoroughly scrubbed and rinsed the color was greatly abated.

All things have an end. So did this carpet rag sewing and dyeing. Work enough for two carpets—plenty of material for two. The warp had been purchased with dried fruit, the wife preferring not to ask the husband for money, as he was still owing a trifle and depreciated debt; yet, like many another thrifty farmer, had a habit of going in debt for some desired object, just as he saw his way clear to pay each former indebtedness, hence was always "owing something."

When all was ready she celebrated the "Fourth" by a visit to Mrs. Hitormiss, the new weaver, riding in the lumber wagon that conveyed husband with the eldest boys and hired man to the celebration, which she declined to attend in the carpet interest.

Mrs. Hitormiss found she could pay a debt for her husband with the proceeds of this first piece of carpet in her new loom. It was her first effort. Mr. H. had set up the loom for his wife. Being a mechanic, presumably all was in first-class order. Mrs. Hitormiss was sure she could count in the threads, the rags were cut so evenly so she declined to measure the stripes as Keziah requested. Not until three of the four breadths were woven did it transpire that they had neglected to see the loom was "set" squarely on the floor. And lo, one side of each breadth was longer than the opposite side. They refused peremptorily to fit together, except by permitting them to spread out fanlike on the floor. Though she had designed a striped carpet, it was not only "striped," but "hitormiss," the stripes "missing" oftener than they "hit." Poor Keziah! In spite of her orderly habits, she had only to decide, "what can't be cured must be endured," and she endured the best she could. Another mistake was a felt coat had been utilized. After a while the felt gave out and departed.

Thus endeth chapter one of Keziah's rag carpet.

ARUAL E. S.

FROM ONE WOMAN'S POINT OF VIEW.

I am sometimes a little amused at the interest all classes seem to take in the farmer and his wife; and also at the various complaints made by members of our profession. Think of a young farmer with a comfortable home unable to find himself a wife! Now, I am willing to wager something that a young man without grit enough to win the regard of the young lady of his choice never earned a dollar of that \$5,000, but that it came to him from some doting parent, and as the petted darling, he expects some girl to beg the honor of sharing his home and name. But, if I am wrong, and the young man has laid siege to the hard heart of some maid who prefers to spend her days in a dusty office, or standing behind some counter waiting on the thankless public, let him find comfort in the words of Miles Standish: "What I thought was a flower is only a weed, and is worthless. Out of my heart will I pluck it." And if he will look about him with true chivalry, he will find some sweet girl who may be won by gentle wooing.

And think of such a question as "Is education essential to the farmer's wife," being asked! Why should such a question apply to the farmer any more than to some other working man. We know there are as many degrees in farming as there are in mechanics, which range all the way from the village blacksmith to Edison, the great inventor. If the question was, Is education essential to a poor man's wife? there would be some point to it.

We see much advice given to girls in regard to throwing themselves away on a poor man. And it usually tells them rather to go forth and conquer destiny with their own white hands, forgetting that such independence is a myth. But the fact is, no

girl with force of character enough to win her own way in the world can throw herself away. Her strength and courage will be such an inspiration to the man she chooses to marry that success will surely rest on their banner, and if she went to live in the midst of a desert, she would find some means of creating an attractive happy home. That is the beauty of the new girl, or woman, who feels she has real work to do, and whatever channel her life current takes she follows with the same spirit, or enthusiasm, that means success. It is the visionary girl, she who has received a surface education made up of a few accomplishments that she could not earn her salt by if put to the practical test, that will become a load about the neck of the man who is unfortunate enough to marry her. Unless he has plenty of money, she will become that worst of all things, a discontented wife.

MRS. MAC.

SHORT STOPS.

Peggoty writes: What is the matter with Mr. Voorhees? Has some country girl run away with him? I was raised on a farm and married a farmer, but I do not think for a moment that all the farm girls are married, neither are they like the good Indians, all dead. We have work, plenty of it, but do not consider it drudgery, for we try to put enough pleasure into the years as they go by to lighten the toil.

Mrs. Mac, we are getting our flower beds ready, too. Last fall I neglected top-dressing the tulip bed with fine manure, so this spring I put into practice a hint given by Mr. Stearns at the institute last winter—that of using ashes in the flower beds as well as in the peach orchard. Whether it was the potash I do not know, but we have a fine, rank growth of stalk and the buds are just coming into sight. We take a great deal of comfort in having a few flowers, and the children are learning to give pleasure to others by means of them. Our little girl thinks flowers are wasted unless they can be picked and used. She seldom goes anywhere while flowers are in blossom without taking her basket full.

Angel, you wonder if you know me. I do not know, though I may have entertained you unawares. Send your password and I can tell you.

I. H. writes: To the sisters who have to put up dinners I would recommend the following: In the afternoon take some thin slices of pork (or, better yet, if you had a little beef left from dinner), cut in small bits; put in the kettle with plenty of water, add two sliced onions and half a cup of nicely washed rice. Let these cook a while, then put in several sliced potatoes. When done thicken the gravy a very little. In the morning make a crust of one cup thick cream and two of buttermilk, a pinch of salt and soda according to sourness of cream and buttermilk. Mix soft, line a pressed pan with the crust, then pour in meat and vegetables; put on the rest of crust and bake while you are cooking breakfast. Put up warm, and your men folks will say, Make us another. We like these pies for dinner at home. If the onions are not liked try one without and report.

I always enjoy the Household, and think Short Stops a good name for short items. I have learned many things from the good sisters, and if our editor don't throw this in the waste basket may call again.

WE SHOULD NOT NOTICE SLIGHTS.

Katherine Kean's article in the Household of April 2 asks who are the worshippers of the almighty dollar. Can greater homage be given money than for a woman having "brains, good breeding, gentle manners, education, and refinement," to acknowledge as a slight any apparent lack of attention from one possessing wealth, though "her inferior intellectually and morally?"

How varied our experiences! In our community lived a slender little woman with four little children to care for, and though she took in washings for their support, yet she was ever a welcome guest in the homes of the wealthy. A class of young ladies from homes of refinement chose her to be their Sabbath School teacher. "Rich in goodness of heart and intellect," she was accorded her rightful place, though lacking money. Among the wealthy, and among the poor as well, are people who would not be congenial, and while we should manifest a spirit of love and kindness to-

ward them, yet we cannot enjoy their society as we do that of others. This want of congeniality may not be due to any lack in them, they may have education and refinement, but a subtle something repels.

There is another question that forces itself upon us. Is not sensitiveness one form of pride? True, there are some very sensitive people because of their extreme diffidence, but the one who is forever watching for and construing every act into some personal slight gives proof of being proud. Their feelings are always being hurt, and their pride wounded. Every acknowledgment of a slight is an acknowledgment of inferiority. Is there a family in your community known to be poor and ignorant, filthy, and users of vile language, what is generally termed "low down?" And would you feel slighted if not invited to their home? If not, why not? You are above a slight from any such source. Rise above a slight from any source. Do not acknowledge it even to yourself. It will make your friends much happier and you yourself will be happier if you will cultivate a spirit of independence. Try it.

U. L. C.

GOOD WORDS FOR THE FARMER.

The Michigan Farmer is one of the neatest and best papers that makes its weekly visit in our home, and likewise do our neighbors and farmer club friends think who take it. No one can help but gain practical and useful knowledge from its pages. The Household department is especially interesting; and I always turn directly to it, that I may read the many good instructions, useful receipts, etc., that it contains from week to week. Many times I see inquiries to which I think I will reply, and will at once sit me down and tell the good sister my way; but every day brings its work on the farm, and even if you do not iron the loops on the towels like the woman Mrs. Mayo found ironing (with no time to go anywhere), there is always necessary work to be done which can not always be avoided, at least not without an extra dose the next day. Then, too, it's so very easy to put off writing until a more convenient time, until at last some other householder has given the much-needed information.

Now ere my first attempt is cast into the waste basket, I wish to tell how we preserve our hams or keep them from molding through the summer. We just wrap newspapers or thick brown paper around them, then put them into cloth sacks made of some good stout material (unbleached factory is just right), then hang them up in the corn house or some other out-building that has good ventilation, and I think you will find them free from mold a year from now.

Hoping that some one will try my way and that the Household editor will let me into the sanctum, I will sign myself

North Parma.

C. J. L.

OUR WASHINGTON LETTER.

Dear Household Sisters: As Aunt Em wishes to hear something of the West, I will try and tell her, and when it is published it will answer for all, as I have had several inquiries from Michigan on the same subject.

In the first place, we have a fine climate, not so hot nor so cold as in Michigan. We do not have much rain here; it is over on the Coast at Puget Sound and in Oregon where it rains so much. We are 35 miles from Spokane Falls, a beautiful little city, where the flour mills are run by water power furnished by the falls. Here is what is called the great wheat belt, whole quarter sections of wheat in one field. The country is hilly, mostly, up one and down another, but all in cultivation. This is also a fine fruit country, peaches and grapes excepted. It is what is called the Palouse country, or Palouse hills, as we call it in these parts. Roads are good for a new country; I have seen worse in Michigan in rainy weather.

Our seasons are considerably earlier than in Michigan. Seeding begins before the middle of April. Potato bugs are unknown.

Some one asks for a substitute for a corset. I will tell you of mine, which I have used ever since I was married. I take solid comfort in it. Take a strip of heavy cloth like duck or blue jeans long enough to reach around the body and deep enough to reach to the waist. Fit it snugly with darts in front and one in center of back; put dress stays over each dart, or not; if one is slen-

der it is not necessary. Cut out arm pieces and sew on shoulder straps. Button down the front and it is complete. Have two of these so they can be changed.

Whitman Co., Wash. SISTER MARY.

SINGLE, VERSUS DOUBLE BEDS.

Our thanks are due the one who brought this subject before us in the Household some time ago, giving therewith some valuable thoughts from her researches in medical journals. To the timely article by our sister we would add a few facts.

In cities and villages, among people who can afford to pay the price of an ordinary bed-room set for a single bedstead, it is quite the fashion now for the husband and wife to have, in place of the double bed, two single iron bedsteads painted white and gilded. They are costly and beautiful. So far as we know, fashion has not yet decreed that these single beds shall occupy different rooms, but the lady who showed me through her rooms remarked that she thought "it would be better if they were in different rooms."

A few years ago several young American ladies were traveling in Europe in company. One of the party told me that quite everywhere they found single beds, and if there chanced to be two in one room, the toilet appliances were always separate. So pleased were they with this mode of sleeping that one of the young ladies declared that when she reached home she should tell her mother that she couldn't ever sleep with anybody again. A highly educated woman, and a very sensible one, once said that "when we get civilized enough we shall no more think of two people sleeping in one bed than of their eating out of one plate." Each one of us can help a little, if we will, to

hasten the dawn of this better civilization. Personally, we know that vital force is sometimes imparted from one to another, but just to what extent in daily living, is not clear. That every one in ill health should sleep alone, if possible, surely needs no argument to prove, and if any member of a family were not thriving as they ought, to sleep alone and in a separate room if possible would be a safe, inexpensive and harmless remedy and we verily believe might prove more potent for good than many bottles of medicine. Shall we not experiment in this direction as occasion offers and report later?

AUNT CHARITY.

CONTRIBUTED RECIPES.

Potato Salad.—Heat two and one-half tablespoonfuls of vinegar to boiling, and pour on well beaten yolks of two eggs, gradually add one and one-half teaspoonfuls of salt, two of French mustard, a pinch of red pepper, one-half cup of sweet cream, one tablespoonful of melted butter. If very thin, boil until it thickens a little. Cut cold boiled potatoes in small pieces, and mix with the dressing. It is improved greatly by adding some chopped onions, or green onions cut in small pieces, and cold boiled eggs, sliced.

EDNA.



MAKE MONEY

fast and easy by selling our wheels. 15,000 on hand; prompt shipment. '98 models \$12 to \$37.50; '97 and '96 models \$9 to \$18. 600 good shopworn and used wheels, \$5, \$5.50 and \$12 each. 100 '97 boys' and girls' wheels, M. & W. tires, \$9.75 each. Art Book on Bicycles Free. We will give a rider agent in each town FREE USE of sample wheel to introduce them. Write for special offer to agents. HEAD & PRESTISS, 146 Ave. E, Chicago.

To stick things use
Beware!! Take no
substitute.

MAJOR'S CEMENT.

Knocked out by Lumbago?

It's because you don't cure it with ST. JACOBS OIL, which penetrates to the seat of the pain and subdues, soothes, cures.

SELF-PRONOUNCING

S. S. TEACHER'S REFERENCE BIBLE.



This cut shows appearance when closed.



This cut represents the Bible lying open.

They that sealed the covenant.

NEHEMIAH.

gavest before them, neither turned they from their wicked works.

36 Behold, ^awe are servants this day, and for the land that thou gavest unto our fathers to eat the fruit thereof and the good thereof, behold, we are servants in it:

37 And ^eit yieldeth much increase unto the kings whom thou hast set over us because of our sins: also they have ^fdominion over our bodies, and over our cattle, at their pleasure, and we are in great distress.

38 And because of all this we ^gmake a sure covenant, and write it; and our princes, ^hL^evites, and priests, ²h seal unto it.

CHAPTER X.

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Legal Department.

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Farmer May Peddle His Own Produce Without a License.—I. P. S., Kenton, Mich.—Can I hawk or peddle my farm produce without paying any license? If not, where can I get it and what does it cost?—A farmer may sell or peddle his own produce without a license.

Animals Running at Large in the Highway.—N. A. C., Almont, Mich.—What is the law in regard to stock running at large in the public highway? A removes his road fence for the purpose of grading. C turns his cattle loose on the road and they trample over A's crops. What remedy has A?—Since 1867 it has been unlawful for cattle to run at large in any public highway unless the board of supervisors in any county has passed a contrary resolution. A can recover in a suit for damages against C.

Spearing Fish.—Subscriber, Alden, Mich.—What is the law in regard to spearing fish in rivers, creeks and inland lakes?—Any fish, with the exception of brook trout, rainbow trout, German or brown trout, grayling, land-locked salmon and black-bass, may be speared through the ice in the inland lakes and streams during December, January, February and March in each year, except where fish in such waters are protected by any local acts of the legislature. Otherwise it is unlawful to spear any fish at any time in this State.

No Lien for Board of Horse.—Prior Chattel Mortgage.—E. F. R., Lapeer, Mich.—I took horse to board during winter until April 1st, and owner has neither called for horse nor paid for board. Learn that there is a chattel mortgage on horse. Can I hold horse for board? Can mortgagee take horse without paying board bill?—There is no lien in this State for keep of horse. Your only course would be to put bill in judgment and levy on horse. Levy, however, would be subject to chattel mortgage. Mortgagee may foreclose his mortgage and take horse without paying for board.

A Fine Example of a Mean Neighbor.—Subscriber, Orleans, Mich.—We have a man in our neighborhood who, out of pure cussedness, hauls manure lengthwise of our foot and bicycle path along the public highway when there is plenty of room for him in highway, which is 60 feet wide. As he hauls this manure it is scattered all along the path. What can be done to prevent it?—There is no statute which imposes a penalty for such conduct, its animus being too low for legislative consideration. Make complaint to overseer, who may be willing to put in force statute against placing rubbish and waste in highway. Your neighbor's patriotism should be fired to enlisting point—he can be spared.

Prize Courts—Division of prize money.—I. R. D., Muir, Mich.—What is done with the prizes that our ships capture from Spain?—When a prize is captured a prize crew is put aboard and she is taken into some United States port. The nearest U. S. district court then appoints a prize commission or court to enquire into the capture, and if it is found to be legitimate and regular the prize is sold. If it was of equal or superior power to the captor the crew get the entire proceeds. If it was inferior to the capturing vessel, one-half of the proceeds go to the government. Of the money that goes to the crews making the capture, the squadron commander gets 1-20, the fleet commander 1-100, and the balance of the officers and men who were present when the capture was made receive amounts in proportion to their pay.

The Markets.

WHEAT.

After soaring skywards for several days, the wheat market has begun to drop, and in the past two days prices have declined about 8c on No. 2 red from the highest point reached. The market is still very nervous, and the fluctuations are so frequent and violent as to defy all calculation. The bears will be in a panic one moment, and the bulls the next. However, the big jump in values has given holders a grand opportunity to sell their stocks. Michigan should not have a bushel of the old crop left when the new crop begins to arrive.

The following table exhibits the daily

closing sales of spot wheat in this market from April 15 to May 12, inclusive:

	No. 1.	No. 2.	No. 3.
White.	Red.	Red.	Red.
April 15.....	96	97	93½
" 16.....	96½	98½	95
" 18.....	97	98½	95
" 19.....	97½	99½	96
" 20.....	98	100½	97
" 21.....	102	104	100
" 22.....	103	105	101
" 23.....	103	105	101
" 24.....	103	105	101
" 25.....	103	105	101
" 26.....	103	105	101
" 27.....	103	105	101
" 28.....	103	105	101
" 29.....	103	105	101
" 30.....	103	105	101
May 1.....	103½	105½	101½
" 2.....	104	106	102
" 3.....	104	106	102
" 4.....	104	106	102
" 5.....	104	106	102
" 6.....	104	106	102
" 7.....	104	106	102
" 8.....	104	106	102
" 9.....	104	106	102
" 10.....	104	106	102
" 11.....	104	106	102
" 12.....	104	106	102

The following is the record of the closing prices on the various deals in futures each day during the week:

	May.	July.	Aug.
Friday.....	130	100½	91
Saturday.....	100	105½	94
Monday.....	101	119½	104
Tuesday.....	156	113	98
Wednesday.....	147	110	96½
Thursday.....	140	107½	95

The visible supply of wheat on Saturday last in the United States and Canada was 22,528,000 bushels, as compared with 23,263,000 bushels the previous week, and 31,862,000 bushels at the corresponding date last year. The decrease for the week was 735,000 bushels.

According to the reports received by the Daily Trade Bulletin within the past few days the condition of the growing winter wheat crop is very good, excepting in California. East of the Rocky mountains the poorest outlook is in Ohio, Illinois, Texas and Missouri, and in these states the yields will be nearly average ones.

The Minneapolis Market Record estimates northwestern wheat stocks in all positions at 15,000,000 bushels. The mills will require 1,500,000 bushels weekly for sixteen weeks to September 1.

Spain and Italy have abolished duties upon foreign wheat, and this following the same action in France was a strong factor in advancing prices. It is quite evident from the result on the price of wheat that the foreigner was paying those duties. The Italian and Spanish governments have also issued decrees forbidding the exportation of wheat from those countries.

A telegraphic dispatch from San Francisco says that owing to the prolonged drought throughout that state the outlook for the wheat crop is a decidedly gloomy one. According to the reports received by the weather bureau officials, only a small amount of wheat raised on irrigated land and summer fallow in the foothills regions will be harvested; and some other sections will be little better. Feed is scant.

According to the report of the Daily Trade Bulletin and the Minneapolis Market Record the supplies of flour and wheat in the United States and Canada decreased 12,348,000 bushels during April, against a reduction of 9,464,000 bushels during March, and a decrease of 3,720,000 bushels in April, 1897. Total supply now 49,719,000 bushels, against 62,047,000 bushels on April 1, and 65,500,000 bushels on May 1, 1897.

According to Broomhall the world's shipments of breadstuffs for the week were as follows: United States, 2,868,000 bushels; Russia, 4,036,000 bushels; Roumania, 626,000 bushels; Argentina, 1,376,000 bushels; India, 1,238,000 bushels; Austria, 170,000 bushels; various, 254,000 bushels. Total, 10,568,000 bushels.

The Austrian government has decided not to suspend the duties on foreign wheat.

Cool weather is holding back wheat, as well as other crops in this state.

The Texas crop will be later than expected owing to cool and unseasonable weather.

DAIRY PRODUCTS.

BUTTER.

Increasing receipts are causing a steady decline in values, both of creamery and dairy. Old stock is hard to dispose of, and is only accepted at concessions in price. We look for a still further decline in values when pastures are better and the flow of milk increases in volume. Quotations are as follows: Creamery, 17½c; prime dairy 14½c; fair to good, 13½c; common, 11½c; low grade, 7½c per lb. At Chicago the market is very quiet, with prices at the same range as noted a week ago. The demand is reported very light, and the market lacks both strength and activity. Quotations on Thursday were as follows: Creameries, extra, 16c; first, 15½c; seconds, 13½c; dairies, extra, 15c; first, 13½c; seconds, 12½c. Ladies, extra, 13½c; packing stock, 11½c; roll butter, fresh, 11½c. The New York market ruled steady up to a day or two ago, when increasing receipts caused some weakness. However, quotations are unchanged since a week ago, and the only sign of weakness is shown in the fact that quality is more critically looked after by buyers. Quotations at the close on Thursday were as follows: Creamery, western extras, per lb, 17c; do firsts, 16½c; do thirds to seconds, 15½c; do state, fancy, 16½c; do firsts, 16c; do thirds to seconds, 15½c; do state dairy, half-krin tubs, fancy, 16½c; do Welch tubs, fancy, 16c; dairy tubs, firsts, 15½c; do thirds to seconds, 14½c; imitation creamery, extras, 15½c; do seconds to firsts, 13½c; factory, firsts, 14c; do lower grades, 13½c. At Elgin the finest fancy creamery is selling at 16c per lb, with a fair demand.

CHEESE.

The approach of the time when new cheese will reach the market is foreshadowed by a gradual weakening in values. In this market 9½c@10c is the best price asked by jobbers for full creams, and the demand is not at all active at those prices. It is singular that people will leave old cheese for new when the former is not only more palatable to the regular cheese eater, but much more di-

gestible and nutritious. The first of the new make generally comes to market before it is fully ripened, and unripe cheese is as dangerous as unripe fruit. The smooth taste demanded by many consumers is a feature of new, unripened cheese, and a sign that it is not yet fit for consumption. At Chicago the market is reported very quiet, with quotations about the same as a week ago. No new cheese has yet been offered in that market. Quotations on Thursday were as follows: Young America, 7¼c@8¼c; twins, 7¾c@8¼c; cheddars, 6¾c@7¾c; Swiss, 11½c@13c; Limburger, 7½c@12c; brick, 8c@10½c. The New York market is quiet, with values on old cheese at the same range as a week ago, while the market is inclined to weaken under increased receipts of new. The Tribune says of the market: "The demand for old cheese, however, has been slow, and while moderate stocks hold prices fairly steady, the tone is not quite so strong as a fortnight or so ago. Supplies of new, large full-cream cheese have been comparatively moderate as yet, but with lower prices in Canada, exporters were inclined to operate cautiously, and at the close 8c was about all that could be depended upon for average best marks of large, while white cheese has been occasionally shaded a fraction, though some special factories of colored under engagement have been passed this week at 8½c. New small size full cream has been fairly plenty, and with only a moderate home trade demand stock tended to accumulate, and prices have ruled weaker and irregular, with 8c about top at the close, though some special factories of colored are held a fraction higher, but the above figure is certainly the extreme for white, and has been shaded in some instances." Quotations on Thursday were as follows: New cheese—state, full cream, colored, large, fancy, 8c; do white, fancy, 7¾c@8c; do good to prime, 7½c; do small, colored, fancy, 8c; do white, small, fancy, 7¾c@8c; do good to prime, 7½c; light skims, small, choice, 6½c@7c; part skims, small, choice, 6¼c@6½c; do large, 5½c@6c; do good to prime, 4½c@5c; do common to fair, 3½c@4c; full skims, 2½c@3c. Old cheese—state, full cream, full made, colored, large, fancy, 9c; do white, large, fancy, 8½c@9c; do choice, 8c@8½c; do fair to good, 7½c@8c; do common, 6½c@7c; do all made, colored, small, fancy, 9c; do white, small, fancy, 8¾c@9c; do prime to choice, 8¼c@8½c; do common to good, 6½c@7c. The Liverpool market is quoted dull, with the best American colored selling at 4½s per cwt., and the best white at 4½s., the same figures as quoted last week.

WOOL.

The wool markets at the east are showing symptoms of increased activity in certain lines, principally in medium wools, such as are required to meet government contracts for uniforms for its troops. What the extent of such requirements will be is yet a problem and it can only be answered after the struggle with Spain has ceased. Sales in Boston last week only figured up 745,000 lbs of domestic and 265,000 lbs of foreign, as compared with 1,262,000 lbs domestic, and 3,032,000 lbs foreign for the same week last year. The receipts in that market from January 1st up to the end of last week show a decrease of 44,652 bales domestic, and 251,000 bales of foreign. It is apparent markets are in a waiting condition, with little business doing, but wool held firmly. The Commercial Bulletin says of the market: "The easing of money and the stir in manufacturing circles occasioned by government demands have had a reviving influence for the moment on the languid market. A half per cent reduction in rates, and a greater willingness on the part of banks to place loans have together served to relieve in a measure the high tension of feeling. Government contracts, from a sound debtor, and forming practically the only business of the season, have proven a very tempting bait to manufacturers and set them on the 'quiver,' and their figuring on bids, with renewed interest in stocks, served this week to start a lively trade in sample bags. Further than this an actual business has developed in medium unwashed fleeces, one-half bloods and better. Under the semblance of activity views have assumed an appreciable gain in firmness, and prices have held very well."

So far as prices are concerned, they are practically at the same range as a month ago. While they may have been shaded to effect sales in some instances, the majority of holders are asking as high prices as ever. Purchasers, however, are holding off, thinking later prices will favor them. We do not see how they can without some unexpected event occurs to turn the market downward. The London wool sales are now in progress, and values are strong, under active competition, especially for fine merinos. No purchases are being made for America. In Chicago, Michigan fine unwashed is quoted at 16c; medium unwashed, 19½c; coarse unwashed, 17½c per lb. These prices are about the same as are asked in interior markets in this State. Very little wool is moving from first hands, as most growers look for better prices later on. At Boston, Michigan wools are quoted as follows: Unwashed X, 17½c; do unwashed, 18½c; washed fine delaine, 27½c; washed X, 23c; No. 1 washed, 28½c; coarse washed, 26½c; half-blood, unwashed, 22c.

DETROIT PRODUCE MARKET.

Detroit, May 12, 1898.

FLOUR.—Quotations on jobbers' lots in barrels are as follows:
Straight.....\$6.75
Clear.....7.00
Patent Michigan.....7.50
Low Grade.....5.50
Rye.....4.50
CORN.—The visible supply of this grain on Saturday last in the United States and Canada was 23,933,000 bu as compared with 27,044,000 bu the previous week, and 15,081,000 bu at the corresponding date in 1897. Quotations in this market are as follows: No. 2, 33c; No. 3, 33½c; No. 2 yellow, 40½c; No. 3, 40c per bu. Market firm.
OATS.—The visible supply of this grain in the United States and Canada on Saturday last was 9,534,000 bu, as compared

with 11,218,000 bu the previous week, and 10,895,000 bu at the corresponding date in 1897. Quotations are as follows: No. 2 white, 36½c; No. 3 white, 36c per bu. Market strong.

RYE.—The visible supply of this grain in the United States and Canada on Saturday last was 1,886,000 bu, as compared with 2,830,000 bu the previous week, and 3,153,000 bu at the corresponding date in 1897. Market has advanced. No. 2 quoted at 68c per bu.

BARLEY.—The visible supply of this grain on Saturday last was 616,000 bu, as compared with 841,000 bu the previous week, and 2,134,000 bu at the corresponding date in 1897. Quoted at \$1 per cwt.

BEANS.—Market active and firm; now quoted at \$1.25 per bu for spot, May and June.

FEED.—Jobbing quotations on carload lots are as follows: Bran and coarse middlings, \$14; fine middlings, \$15; cracked corn, \$15; coarse corn meal, \$13; corn and oat chop, \$13 per ton.

LIVE POULTRY.—Chickens, 8½c@9c; fowls, 7½c@8c; ducks and geese, 7½c@8c; turkeys, 10½c@11c per lb.

EGGS.—Selling at 10½c@10c per doz.

TALLOW.—Quoted at 3¼c@3½c per lb.

HAY.—Market has advanced; quoted at \$8.75 per ton for baled.

CABBAGE.—Quoted at \$1.50@1.75 per crate.

DRIED FRUITS.—Evaporated apples, 8½c@9c; evaporated peaches, 10½c@12c; dried apples, 4½c@5c per lb.

APPLES.—Selling at \$3.00@3.50 per bbl for fair to good, and \$3.75@4.00 for fancy.

MAPLE SUGAR.—Pure quoted at 10½c per lb; mixed, 8½c@9c per lb.

HONEY.—Quoted at 9½c@11c per lb for ordinary to best.

ONIONS.—Market has jumped in an unexpected manner; now quoted at 35c@40c per bu.

POTATOES.—Market firm; quoted at 8½c@9c from store, and \$1.25@1.40 per bag of 1½ bu on city market; at Chicago they are quoted at 70c@82c per bu.

HIDES.—Market steady and unchanged. Quotations are as follows: No. 1 green, 7c; No. 2 green, 6c; No. 1 cured, 8c; No. 2 cured, 7c; No. 1 green calf, 9c; No. 2 green calf, 7½c; No. 1 kip, 8c; No. 2 kip, 6½c; sheepskins, as to wool, 90c@1.25; shearings, 12c@20c.

COFFEE.—Quotations are as follows: Roasted Rio, ordinary, 9c, fair, 11c; Santos, good, 14c, choice 18c; Maracaibo, 20c; Java, 26c@30c; Mocha, 28c@32c.

PROVISIONS.—Mess pork and lard have advanced. Quotations are as follows: Mess pork, \$11 per bbl; short cut mess, \$11.25; short clear, \$10.75; compound lard, 5c; family lard, 5½c; kettle lard, 6½c; smoked hams, 8¼c@8½c; bacon, 8½c@9c; shoulders, 5½c; picnic hams, 6c; extra mess beef, \$9.00; plate beef, \$9.75.

OILS.—Lined and lard oils are higher: Raw linseed, 45c; boiled linseed, 47c per gal, less 1c for cash in ten days; extra lard oil, 53c; No. 1 lard oil, 34c; water white kerosene, 8½c; fancy grade, 11½c; deodorized stove gasoline, 7½c; turpentine, 34c per gal in bbl lots.

HARDWARE.—Glass has declined; no other changes. Latest quotations are as follows: Wire nails, \$1.60; steel cut nails, \$1.55 per cwt, new card; axes, single bit, bronze, \$5.00; double bit, bronze, \$8.50; single bit, solid steel, \$6.00; double bit, solid steel, \$9.50 per doz; bar iron, \$1.35; carriage bolts, 75 per cent off list; tire bolts, 70 and 10 per cent off list; painted barbed wire, \$1.65; galvanized, \$1.35 per cwt; single and double strength glass, 80 and 90 per cent off new list; sheet iron, No. 21, \$2.50 per cwt; galvanized, 75 and 10 per cent off list; No. 9 annealed wire, \$1.45 rates.

DETROIT LIVE STOCK MARKET.

Michigan Central Stock Yards.

CATTLE.

Thursday, May 12, 1898.

Receipts Thursday, 548; from the west direct to butchers, 24; on sale, 524, as compared with 437 one week ago. Market active and about steady for good handy butchers; heavy steers weak to 10c lower. We quote: Good to choice steers, av 1.150 to 1.250 lbs, \$4.60 to \$4.75; av 900 to 1,100 lbs, \$4.35 to \$4.50; light to good, \$4 to \$4.20; steers and heifers, \$4 to 4.40; mixed butchers and fat cows, \$3.25 to \$4; bulls, light to good butchers, \$3 to \$3.50; feeders and stockers active at \$3.60 to \$4.20. Veal Calves—Receipts, 156; one week ago, 183; active and higher; sales at \$4.50 to \$5.75 per 100 lbs. Milch cows and springers in good demand; sales range from \$30 to \$50 each.

Ganong sold Cook & Fry 13 steers and heifers av 800 at \$4.25.

Korff sold Caplis & Co 6 mixed butchers av 953 at \$3.65 and a cow weighing 920 at \$3.10.

Adams sold Mich Beef Co 2 steers av 1180 at \$4.65 and 2 cows av 950 at \$3.35.

Lomason sold Black 2 cows av 925 at \$3.25 and a bull weighing 1,300 at \$3.40.

Cooper sold Mason 2 feeders av 725 at \$4 and a bull weighing 470 at \$3.

Clark sold Schleicher 4 stockers av 645 at \$4.

Not sold Robinson 23 steers and heifers av 939 at \$4.40.

Keisley sold Mich Beef Co 2 bulls av 1140 at \$3.45 and 3 cows to Black av 1,083 at \$3.65.

Sharp sold Black 10 mixed butchers av 951 at \$3.60, a cow weighing 1,000 at \$3 and a steer to Sullivan weighing 780 at \$3.60.

Behlmer sold Fitzpatrick 18 steers and heifers av 692 at \$4.25 and 6 mixed butchers av 910 at \$3.75.

Ed Clark sold Mason a steer weighing 680 at \$4.10, 4 mixed butchers to Black av 1,102 at \$3.35 and 2 to Caplis & Co av 1,240 at \$3.75.

Ackley sold Mich Beef Co 6 steers and heifers av 989 at \$4.15 and 4 mixed av 1,225 at \$3.40.

Glenn sold Caplis & Co 4 mixed butchers av 930 at \$3.45.

Dennis sold same 25 steers av \$32 at \$4.35.

Glenn sold Mason & F 4 mixed stockers av 490 at \$3.25 and 8 stockers av 687 at \$4.

Major sold Mich Beef Co 24 steers and heifers av 1,021 at \$4.40.

Cushman sold Fitzpatrick 17 steers av \$18 at \$4.40.

Lomason sold Mason & F 4 stockers av 750 at \$4.10 and a heifer to Fitzpatrick weighing 630 at \$4.

Spicer & M sold Kammen 2 steers av 905 at \$4.45 and 4 mixed butchers av 930 at \$3.60.

Rook sold Mich Beef Co 6 heifers av 820 at \$4 and a cow weighing 1,060 at \$3.25.
Stephens sold Vought 13 steers and heifers av 959 at \$4.25, a cow to Black weighing 910 at \$3.40 and 1 do weighing 1,430 at \$3.75.

John Magee sold Black 7 mixed butchers av 561 at \$3.50.
Spicer & M sold Fitzpatrick 2 steers av 710 at \$4.20, a cow weighing 880 at \$3.70 and 2 steers to Kamman av 862 at \$4.25.

Cooper sold Nanquin 11 steers av 862 at \$4.25.

Korff sold Caplis & Co 9 steers av 1,046 at \$4.35.

Glenn sold Mich Beef Co 24 steers and heifers av 881 at \$4.25.

Murphy sold Mason & F 2 steers av 835 at \$4.10, a fat cow to Black weighing 1,440 at \$4 and 1 do weighing 1,100 at \$3.75.

Ed Clark sold Caplis & Co 24 steers av 927 at \$4.25.

W. Clark sold Sullivan 17 steers av 1,004 at \$4.30 and a cow weighing 1,060 at \$3.55.

Haley sold Sullivan 5 steers av 790 at \$4.20.

Sprague sold Black 4 mixed butchers av 1,007 at \$3.75.

Magee sold Caplis & Co 5 bulls av 720 at \$3.35.

Ed Houghton sold Schleicher 6 steers av 873 at \$4.40.

Spicer & M sold Mason & F 11 stockers av 844 at \$3.90.

Murphy sold Caplis & Co 3 steers av 1,073 at \$4.40 and a bull to Caplis & Co av 1,430 at \$3.60.

McLaren sold same a steer weighing 1,260 at \$4.35 and a cow weighing 1,060 at \$3.90.

Roe & Holmes sold Mich Beef Co 2 cows av 1,250 at \$3.90, 1 do weighing 1,340 at \$3.90, 1 do weighing 910 at \$3.40, a bull weighing 960 at \$3.50, 4 cows av 1,190 at \$3.90, 2 do av 1,190 at \$3.90, 2 do av 1,050 at \$3.40, 4 do av 1,330 at \$3.55, a bull weighing 1,020 at \$3.40 and 3 steers av 1,090 at \$4.50, 2 steers to Robinson av 950 at \$4.40, 4 steers and heifers av 727 at \$4.40, 4 mixed butchers to Fitzpatrick av 1,082 at \$3.40, 2 heifers av 895 at \$4.25, a steer weighing 900 at \$4.50 and a cow weighing 770 at \$3.

RECEIPTS THURSDAY, 760; one week ago, 377. Market fairly active, but 15 to 20c lower. Range of prices: Clipped lambs, \$4.25 to \$4.50; fair to good mixed lots, \$3.00 to \$4.20.

Lomason sold Hiser, 24 clipped lambs av 99 at \$4.50.

Shook sold Monaghan 20 clipped lambs av 105 at \$4.50.

McLaren sold Mich Beef Co 49 clipped lambs av 87 at \$4.40.

Roe & Holmes sold Robinson 14 clipped lambs av 92 at \$4.50.

Ackley sold Sullivan Beef Co 31 clipped lambs av 99 at \$4.50.

Mayer sold Mich Beef Co 109 av 85 at \$4.35.

Clark sold Loosemore 29 av 74 at \$4.60.

Dennis sold Fitzpatrick 128 clipped lambs av 68 at \$4.35.

Spicer & M sold Monaghan 21 clipped lambs av 98 at \$4.70.

RECEIPTS THURSDAY, 5,045, as compared with 4,097 one week ago. Market active, and 10c to 15c higher than last Friday's closing. Range of prices: Good mediums and yorkers, \$4.05 to \$4.10; light yorkers, \$3.90 to \$4.05; pigs, \$3.50 to \$3.80; stags, one-third off; roughs, \$3.10 to \$3.50.

Stephens sold Parker, Webb & Co 23 av 173 at \$4.00.

Cushman sold same 80 av 187 at \$4.05.

Baughman sold same 85 av 169 at \$4.05.

Korff sold same 43 av 166 at \$4.10.

Prucha sold same 58 av 166 at \$4.10.

McRoberts sold same 62 av 183 at \$4.10.

Wade sold same 90 av 172 at \$4.05.

Gifford sold same 49 av 201 at \$4.12½.

Weitzel sold same 67 av 186 at \$4.10.

Pakes sold same 154 av 160, and 84 av 161 at \$4.05.

Kelsey sold same 33 av 180 at \$4.00, and 71 av 200 at \$4.10.

McLaren sold same 59 av 161, and 70 av 195 at \$4.10.

Taggart sold same 122 av 168 at \$4.00.

Lomason sold same 31 av 179 at \$4.10.

E. Clark sold same 84 av 187 at \$4.10.

Murphy sold same 47 av 173 at \$4.10.

Messmore sold R S Webb 73 av 143 at \$4.07½.

McKiggon sold same 80 av 192 at \$4.05.

Belheimer sold same 82 av 158 at \$4.10.

Dillon sold same 81 av 159 at \$4.10.

Roe & Holmes sold York 27 pigs av 95, 12 av 86, 16 av 100, and 12 av 83 at \$3.50.

Wolohan sold Sullivan 19 pigs av 89 at \$3.50, and 100 av 161 at \$4.00.

Knapp sold same 116 av 150 at \$4.02½.

Reason sold same 77 av 148 at \$4.00.

Thompson sold same 97 av 145 at \$4.05.

Burden sold same 85 av 143 at \$4.05, and 12 pigs av 94 at \$3.60.

Crosby sold same 73 av 173 at \$4.10.

Sharp sold same 25 av 148 at \$4.00.

Crosby sold same 36 pigs av 88 at \$3.60.

White sold same 133 av 144 at \$4.05.

Genn sold same 56 av 156 at \$3.90, and 28 pigs av 95 at \$3.60.

Spicer & M sold same 20 pigs av 71 at \$3.65.

Sprague sold same 108 av 146 at \$4.00.

Stecker sold Hammond, S & Co 88 av 176 at \$4.10.

Mayer sold same 117 av 175 at \$4.10, and 31 pigs av 104 at \$3.60.

Adams sold same 65 at 164 at \$4.07½.

Kalahar sold same 68 av 176 at \$4.10.

Arkley sold same 41 av 168 at \$4.05.

Weedman sold same 79 av 176 at \$4.10.

A. A. Bray sold same 87 av 173 at \$4.00.

Dennis sold same 121 av 169 at \$4.10.

Shook sold same 78 av 158 at \$4.05.

Stabler sold same 67 av 166 at \$4.10.

J. McMullen sold same 168 av 160 at \$4.10.

Haley Bros sold same 142 av 160 at \$4.10.

Spicer & M sold same 27 av 216 at \$4.15.

Roe & Holmes sold same 92 av 181, and 43 av 184 at \$4.15.

Haley sold same 53 av 178 at \$4.10.

Roe & Holmes sold same 42 av 158, 34 av 188, 65 av 173, 37 av 180, 52 av 189, 59 av 150, 106 av 160, 42 av 160, and 45 av 174, all at \$4.15.

Spicer & M sold same 51 av 193, and 75 av 191 at \$4.15.

OverSmith sold same 65 av 158 at \$4.07½, and 44 av 114 at \$3.65.

Friday, May 13, 1895.
CATTLE.

Receipts Friday, 206; one week ago, 288. Market opened active and unchanged, but at the close was rather weak to shade lower; \$4.55 was top price to-day for good steers av 975 to 1000 lbs., balance as noted; top price for bulls, \$3.60. Veal calves unchanged. Milch cows active and strong; choice fresh young cows would

bring \$2.50 to \$5 more than above quotations.

Nott sold Patrick 20 steers av 906 at \$4.50.

Stevens sold Caplis & Co 4 mixed butchers av 1,200 at \$3.75 a cow weighing 1,200 at \$3.75 and 1 do weighing 900 at \$3.

Roe & Holmes sold Wilson 26 steers av 881 at \$4.40 and 3 av 836 at \$4, 11 steers to Sullivan av 1,060 at \$4.50, 3 do av 1,163 at \$4.25, a bull to Robinson weighing 1,050 at \$3.60 and a cow weighing 970 at \$3.25.

Astley sold Mich Beef Co 3 mixed butchers av 1,080 at \$4.

McMullen sold Sullivan 6 steers av 1,005 at \$4.50.

Horne & R sold Mich Beef Co 2 bulls av 875 at \$3.40.

Talmage sold Mason a bull weighing 420 at \$3.25, 2 stockers av 518 at \$4, 2 steers to Caplis & Co av 1,185 at \$4.40, 1 do weighing 930 av \$4.10 and a bull weighing 950 at \$3.35.

Ramsey sold Mason & F 7 stockers av 594 at \$4, 4 heifers to Caplis & Co av 550 at \$3.80, a bull weighing 1,040 at \$3.55 and a cow weighing 1,070 at \$3.80.

Casey sold Fitzpatrick 9 mixed butchers av 1,016 at \$3.90.

Bullen sold Sullivan 4 steers av 1,050 at \$4.50, 3 do av 740 at \$4.25 and a bull to Mich Beef Co weighing 890 at \$3.

Heenev sold Mich Beef Co 4 cows av 1,107 av \$3.85, a bull weighing 610 at \$3 and 9 steers to Sullivan av 1,036 at \$4.50.

Fox & Bishop sold Mich Beef Co 4 steers av 812 at \$4.40 and 5 mixed butchers av 940 at \$3.50.

Robb sold Caplis & Co 5 cows av 896 at \$3.50 and a steer to Sullivan weighing 1,160 at \$3.50.

Spicer & M sold Mason 11 steers and heifers av 913 at \$4.30.

Luckie sold Caplis & Co 5 steers av 870 at \$4.35.

Brewer & B sold Kamman 3 mixed butchers av 986 at \$3.40 and 5 stockers to Mason av 690 at \$3.80.

Webster & B sold Sullivan 21 steers av 1,060 at \$4.55.

SHEEP AND LAMBS.

Receipts Friday, 589, one week ago 358. Market quiet and unchanged.

Sutton sold Sullivan Beef Co 104 mixed butchers av 102 at \$3.60.

Parsons & H sold Mich Beef Co 38 mixed butchers av 77 at \$4.

Bullen sold same 74 clipped lambs av 92 at \$4.40.

Ramsey sold Monaghan 102 part clipped lambs av 87 at \$4.62½.

Fox & Bishop sold Fitzpatrick 86 clipped lambs av 78 at \$4.35.

HOGS.

Receipts Friday, 2,169, as compared with 3,133 one week ago. Market active and 15 to 20 cents higher, or 30 to 35 cents higher than closing price one week ago. Range of prices: Yorkers and mediums, \$4.27½ to \$4.35; two lots of choice, av 180 lbs., brought \$4.37½; light yorkers, \$4.00 to \$4.25; pigs, \$3.75 to \$3.85; stags, ½ off; roughs, \$3.25 to \$3.65.

Bird sold McClaughry 12 av 165 at \$4.00.

Roe & Holmes sold Bird 12 pigs av 81 at \$3.85.

McCloughry sold Spencer 58 av 168 at \$4.00.

Sly sold Sullivan 46 av 153 at \$4.20.

Bullen sold same 28 pigs av 117 at \$3.85.

Roberts & S sold same 14 pigs av 105 at \$3.75.

Pline sold same 38 av 148 and 77 av 151 at \$4.20.

Brewer & B sold same 67 av 157 at \$4.20.

Ramsey sold Hammond & Co 26 av 150 at \$4.20.

Bullen sold same 120 av 175 at \$4.25.

Roe & Holmes sold same 77 av 158 at \$4.25.

Fox & Bishop sold same 108 av 183 and 10 av 191 at \$4.30.

Bandfield sold same 90 av 169 at \$4.30.

Robb sold same 69 av 149 at \$4.27½.

Cassey sold same 54 av 204 at \$4.30.

Parsons & H sold same 119 av 175 and 94 av 182 at \$4.37½.

Astley sold Parker W & Co 121 av 157 at \$4.25.

Horne & R sold same 89 av 170 at \$4.25.

Talmage sold same 79 av 178 at \$4.25.

Cartel sold same 66 av 162 at \$4.25.

Shelton sold same 133 av 154 at \$4.25.

Hauser sold same 113 av 175 at \$4.35.

Roberts & S sold same 111 av 180 at \$4.35.

M. Hauser sold same 47 av 184 at \$4.25.

Luckie sold same 30 av 162 and 138 av 151 at \$4.25.

Judson sold Parker, Webb & Co 52 av 134 at \$4.15.

Harger sold same 54 av 168 at \$4.27½.

McMullen sold same 132 av 165 and 76 av 179 at \$4.32½.

OUR BUFFALO LETTER.

East Buffalo, May 12, 1895.

Cattle.—Receipts of cattle on Monday last were 4,884, as compared with 4,752 the same day the previous week, and shipments were 3,850, as compared with 3,740 for the same day the previous week. The market opened slow and lower, prices on all kinds of light to medium steers showing a decline of 10¢ to 20¢, with the least decline on good, handy weight steers in fine condition. Good fat cow and heifer stock sold about steady, while heavy steers were generally neglected there being no demand for export. Bulls were scarce and ruled strong for anything good. Oxen were in light supply, but only good, smooth light ones brought full prices. The range on prime steers was \$4.90 to \$5.10; on best butchers' steers, \$4.50 to \$4.70; on fair to best heifers, \$3.90 to \$4.50; on cows, \$2.50 to \$4.15; on bulls, \$3.00 to \$4.15; on feeders, \$4.00 to \$4.50; on stockers, \$3.00 to \$4.75. The best lot of Michigan steers, brought in by C. E. Rowland, brought \$5.00, and only one bunch sold higher. Since Monday the market has ruled dull and slow, with all classes of heavy cattle showing a decline. Exporters and feeders have held steady. Stockers and feeders have held steady. Quotations follow: Export and Ship- ping Steers.—Prime to extra choice finished steers, 1400 to 1500 lbs., \$4.90 to \$5.00; prime to choice steers, 1300 to 1400 lbs., \$4.90 to \$4.95; good to choice fat steers, 1200 to 1300 lbs., \$4.80 to \$4.90; good to choice fat smooth steers, 1050 to 1250 lbs., \$4.65 to \$4.75; green coarse and rough fat steers, 1050 to 1400 lbs., \$4.00 to \$4.40. Butchers' Native Cattle.—Fat smooth dry heifers, 1050 to 1150 lbs., \$4.50 to \$4.70; fat smooth dry fed light steers, 900 to 1000 lbs., \$4.40 to \$4.50; light, half-fed steers, \$4.20 to \$4.35; green steers, thin to half fattened, 1000 to 1300 lbs., \$3.90 to \$4.25; fair to good steers, 900 to 1000 lbs., \$4.15 to \$4.40; choice smooth fat

heifers, \$4.40 to \$4.65; fair to good fat heifers, \$3.90 to \$4.30; light thin half-fed heifers, \$3.50 to \$3.90; fair to good mixed butchers' stock, \$3.55 to \$4.25; good, smooth well-fattened butcher cows, \$3.90 to \$4.15; fair to good butcher cows, \$3.25 to \$3.75; common old shelly cows, \$2.50 to \$3.15. Bulls and Oxen.—Export weight bulls, fat and smooth, \$3.85 to \$4.15; good fat smooth butchers' bulls, \$3.75 to \$4.00; fair to good sausage bulls, \$3.40 to \$3.75; thin, old and common bulls, \$3.00 to \$3.35; stock bulls, common to extra, \$2.75 to \$3.40; fat smooth young oxen to good lots fit for export, \$4.25 to \$4.50; fair to fairly good, partly fattened young oxen, \$3.50 to \$4.15; old, common and poor oxen, \$2.25 to \$3.40. Native Stockers and Feeders.—Feeding steers, good style weight and extra quality, \$4.35 to \$4.50; feeding steers, common to only fair quality, \$4.00 to \$4.25; good quality yearling stock steers and calves, \$4.60 to \$4.80; stock heifers, common to choice, \$3.25 to \$3.75; stock steers, cull grades and throw outs, \$3.00 to \$4.15.

Thursday the market ruled steady and unchanged.

Sheep and Lambs.—Receipts Monday were 13,800, as compared with 13,800 the previous Monday; shipments were 10,400, as compared with 9,600 for the same day the previous week. The market on Monday opened with a fairly good demand, and fully 10c to 15c higher on lambs, while desirable sheep were stronger. Heavy sheep and lambs, if of good quality, were in better demand, but coarse heavy lots were dull and slow. Fair to extra clipped lambs sold at \$4.75 to \$5.20; fancy wether clipped sheep, \$4.10 to \$4.20; choice to extra mixed handy weights, \$4.00 to \$4.15. At the close the market ruled barely steady, but the pens were pretty well cleared. Since Monday the market has ruled slow. Wednesday the market ruled slow at the start for all kinds of heavy lambs, and also rather slow for good sheep, with prices easier on the latter, and lower for the former. Quotations at the close were as follows: Clipped Lambs.—Choice to extra fresh clipped, \$5.00 to \$5.15; fair to good \$4.65 to \$4.90; culls and common, \$4.15 to \$4.50; heavy clipped lambs, \$4.30 to \$4.40. Clipped Sheep.—Good to fancy wethers, \$4.10 to \$4.20; choice to extra handy mixed, \$4.00 to \$4.10; culls to good, \$2.75 to \$3.85; heavy fed western export clipped sheep, \$3.75 to \$3.85; heavy native corn-fed wether sheep of 110 to 125 lbs., \$3.85 to \$3.90.

Thursday the market ruled 10¢ to 15¢ lower for lambs; sheep, steady; top lambs, \$4.90 to \$5; others, \$4.45 to \$4.80; exporters, \$4.30 to \$4.40.

Hogs.—Receipts of hogs on Monday last were 24,510, as compared with 23,310 for the same day the previous week, and shipments were 16,530, as compared with 19,000 for the same day the previous week. Receipts were somewhat lighter than the previous week; the market was fairly active, but ruled easier than at the close of last week for nearly all classes of hogs. Good to choice light mediums sold at \$4.25 to \$4.30; yorkers, \$4.15 to \$4.20; mixed packers, \$4.25 to \$4.30; best medium weights, \$4.30; good to prime heavy, \$4.30 to \$4.35; pigs, \$3.00 to \$4.00 for common to prime. Since Monday the market has ruled steady to firm for light yorkers, pigs, and light mediums, and stronger for heavy mediums and heavy weights. About all classes show an advance over Monday's figures. Quotations on Monday were as follows: Good to choice light medium grades, 175 to 190 lbs., \$4.25 to \$4.30; choice and selected yorkers, 140 to 160 lbs., \$4.25; light yorkers and pigs mixed, \$4.20; mixed packing grades, 180 to 200 lbs., \$4.20 to \$4.25; fair to best medium weight, 210 to 280 lbs., \$4.30 to \$4.35; good to prime heavy hogs of 270 to 300 lbs., \$4.35 to \$4.40; rough common to good, \$3.80 to \$4.00; stags common to good, \$2.85 to \$3.25; pigs, 110 to 120 lbs., good to prime corn-fed lots, \$3.95 to \$4.00; pigs, thin to fair light weights, 75 to 100 lbs., \$3.65 to \$3.90; pigs, skips and common light and undesirable lots, \$3.00 to \$3.60.

Thursday the market was excited at a strong advance. Yorkers early sold at \$4.20 to \$4.40; later, choice sold at \$4.50 to \$4.55; mediums, \$4.45 to \$4.50; heavy, \$4.50 to \$4.62½; pigs, \$3.95 to \$4.15.

CHICAGO.

Union Stock Yards, May 12, 1895.

Cattle.—Receipts for last week were 50,236 head, as compared with 38,366 the previous week, and 39,985 for the corresponding week in 1897. Receipts Monday were 19,896, as compared with 19,920 for the same day the previous week. An oversupply of cattle on Monday caused a decline of fully 10c on all classes of cattle except the finest quality. Sales were slow on a basis of \$3.85 to \$4.25 for common to fair dressed beef steers up to \$4.75 to \$5.25 for good to prime shippers. The bulk of offerings went at \$4.35 to \$5.00. Stockers and feeders were in good demand, with sales largely at \$4.00 to \$4.65. Cows and heifers sold at \$3.50 to \$4.50; calves, \$3.00 to \$6.00. Up to and including Wednesday of this week, receipts have been 35,810 head, as compared with 35,547 for the same days last week. Trade Wednesday opened slow and dragging, and while a good clearance was made, some classes of stock had to be sold at lower prices. Big heavy natives, horned and branded westerns, and coarse stock generally suffered most. For the week \$5.25 is the top price for top cattle, same as last week; \$5.20 was the top price; bulk of sales of good cattle \$4.75 to \$5.10; exporters, dressed beef operators and market steers sold at \$4.25 to \$4.50; heavy branded cattle sold around \$4.30 to \$4.75. Butchers' stock of all kinds fairly active, but weak; veal calves, \$4.75 to \$6.20. Stockers and feeders fully as high as at any time, \$4.25 to \$4.80; steer calves for the country sold at \$6.10 to \$6.25.

Horticultural.

For The Michigan Farmer.

THE GARDEN.

One of the first vegetables in the spring is asparagus. It comes when most needed and is acceptable to nearly everybody. It is one of the easiest of vegetables to raise, yet comparatively few gardens have an asparagus bed.

The vegetable will take care of itself with very little attention when once given a chance. Perhaps this is one cause for the neglect. If the seed had to be sowed every year and the plants nursed through the spring it might receive more attention, but since it is only necessary to prepare a bed and set out the roots in order to secure a crop for many years the work is apt to be put off till some other time.

There are two ways of starting a bed, either by procuring roots and setting out or by sowing the seed. Each method has its advantages. If roots are procured they will yield stalks suitable for cutting the following spring. When seed is depended upon it is necessary to wait at least a year for the roots to become large enough for transplanting, and then it will be another year before the bed should be used. But when seed is sown the roots will be ready at hand when the garden is made in the spring and for this reason are not likely to be neglected. In the majority of cases, if roots are to be procured, it is necessary to send to some nursery or seed company, and that is something easily neglected or forgotten. All things considered, sowing the seed and raising the roots at home seems to be the way more likely to secure a bed of asparagus. In either case the first cost is not great. Seed for more than a hundred plants is offered for five or ten cents a package, two-year-old roots for \$1.50 per hundred, and one-year-old plants for a little less. The one-year-old plants are smaller and more convenient for setting, but it is not considered best to cut the stalks the second year, while two-year-old plants will not be injured by cutting sparingly the following spring.

A plant that grows as rapidly as the asparagus is at its best when in a deep, mellow soil, where there is an abundance of available plant food. There is not much danger of getting the ground too rich, as the asparagus is one of the most gluttonous of garden plants. The quality, too, depends considerably upon the condition of the soil. Well-fed plants produce large and tender stalks which grow quickly, but on starved soil nothing better is to be expected than small, tough "grass" of little value for the table or for anything, except perhaps to look at.

The seed may be sown as early in the spring as is convenient, in some corner of the garden where it will be out of the way. The rows should be at least a foot apart and the plants two or three inches apart in the row. This will be close enough, especially if the roots are to remain two years, as will be evident when it comes to digging them up.

When the roots are set out they should be given considerable room. We believe that they are usually set much closer than they ought to be in the family garden, and this applies to many other vegetables as well. It seems strange that a man who will allow ample space between the hills of corn or potatoes will crowd everything in the garden into the smallest possible area. If he were to dig into an old asparagus bed he should become at once convinced that such a mass of roots must have a large feeding ground. Market gardeners advocate as much as four feet between the rows at the least, and five or even six are better, with the plants at least two feet apart in the row. Even at these distances the roots soon occupy the ground. This may look rather large, but it should be remembered that fifty well cultivated hills will supply a large family for several weeks.

The most convenient way for setting is to plow out a furrow, then place the roots in this the proper distance apart. When it is not convenient to use the plow we dig holes about a foot in diameter with a spade. The roots do not grow downwards, so should be set so as to spread out horizontally. As to the depth of setting, tastes differ. If the ordinary green shoots are desired the crown of the plant need not be more than three or four inches beneath the level of the ground. If it is set seven or eight inches deep there will be a

long stalk to cut beneath the surface, which will be nicely blanched, but is also likely to be woody. After the plants are set they should be covered by two or three inches of soil and further covered, if need be, as they grow.

Some attach great importance to salt as a fertilizer for asparagus, while others consider it of no value. In either case it must be admitted that the plant will endure an amount of it that will kill the weeds of the garden, so it may be safely applied for this purpose. Old brine from the beef or pork can be turned to good use on the asparagus rows.

There are several varieties offered by seed companies, but they probably differ principally in name, as this is a plant not readily changed in type. The report of a test at the Michigan Experiment Station in 1894 has this to say about them: "Of the six or seven varieties of asparagus on trial here Palmetto has shown a constant superiority in both size and productiveness, with Conover a close second." There are several Mammoths, Giants and Excelsiors offered by seedsmen, if anybody desires to test them, but either the Palmetto or the Conover may be considered as old reliables.

In closing we are tempted to quote from the description of a rather unique method for raising asparagus which we have recently read. The bed was thirty-five years old, and the owner's mode of culture was as follows: "He dug trenches nearly four feet deep, putting bones, old boots and shoes, and manure in the bottom, filling it up with good earth. The plants were set six inches deep in the trench, and eighteen inches apart in the row. The trenches were three feet apart. The bed has always yielded bountifully. He cuts till June 15th, removing the tops late in the fall, and manures heavily soon thereafter, adding from time to time considerable quantities of salt." What good could those old boots and shoes do the asparagus when they were so far under ground?

F. D. W.

For The Michigan Farmer.

MORE FRUIT.

"When I was a boy," said an old man, "we all looked upon fruit as a luxury, something we could do well enough without, if the pork barrel was only full, and we could have plenty of flapjacks, and molasses. I never saw a banana until I was past 20, and on visiting a city noticed a bunch hanging in a grocery window. I went in and asked, 'What those things were,' and on being told their name and that the price was 20 cents each, I did not buy, thinking they were too high. Later, I have seen very fine ones sold at five cents a dozen, and cart loads of them are brought around. As for oranges, once in a long time mother used to buy one, and carefully divided it among the children, we thinking it such a beautiful thing, and wondering if there was any one rich enough to buy and eat a whole one. Look at the luscious grapes, at two or three cents a pound by the basket, and the bunches ripe all around, instead of having a few green ones mixed in. The season, too, is lengthened. I have eaten very nice ones, home grown, on Christmas day. Many grow the small fruits now, and often, even in the city, the yards have a row of currant bushes, one of the most wholesome and luscious fruits we have. They are nature's pills, given us to cleanse the system after the heavy diet of winter. Then, too, they are just the things for small yards, and every householder ought to see if he can't make room for at least a few bushes. It has been up hill work to get the folks where they are now, as regards fruit, and all honor to the growers and horticulturists that have spread their beautiful catalogues and pamphlets so freely. But we are not yet at the top; fruit is still too expensive, it ought to be within the means of the poorest, as cheap as a glass of poor whisky or beer, and the fruit stores on every corner, taking the places of the many saloons. I would like to speak to all the young men starting homes this spring; Don't build your house in some back street, where there is no possibility of a yard. Get out in the suburbs where there is a small space at least. The car fares may be more, but the doctor's and the druggist's bills will be less, and if fruit and flowers are planted, the whole family will be benefited. As yet, fruit farming is not crowded; there is always a market, if it is choice, and if vast fortunes are not made in the business, the good fruit grower may be reasonably sure of a competence.

ANNA LYMAN.

For The Michigan Farmer.

MY STRAWBERRY GARDEN.

Yesterday, April 18th, we finished setting our strawberry garden, and now while the matter is fresh in my mind we are going to tell the readers of The Farmer about it. It is well that we finished yesterday for today it is raining, and a week's difference might have been made in the time of setting. As it is, the rain is just what the strawberries needed to put them in first-class shape. We did not get through them with our cultivator as we intended, but that does not matter so much, as we shall do so just the minute the ground is fit to work. Our strawberry garden contains about 90 square rods, not a very large patch to be sure, but then more money can be made properly attending to a small area of rich garden soil devoted to strawberries than half tending to a large area of poor or medium soil devoted to the same, and as money, next to pleasure and success, is what I am after, I shall continue to put my time where it will bring me pleasure, success and money in the greatest degree and largest amounts.

How many bushels of berries do we expect to get from the 90 rods? Well, two years ago this coming season, from the same amount of ground, we picked about 175 bushels. With a little extra care in cultivating and with an extra application of manure we may expect how many bushels? Well, wait a year and three months and we shall see what we shall see! If we don't get 200 bushels it will be no fault of ours.

While fitting our ground a neighbor came along and made the remark, "You are getting that good enough for

a garden." "Yes," I replied, "when I get through with it, I expect it will be good enough for a strawberry garden."

Now, while some might not be particular in selecting their best ground for the growing of small fruit, we are, and what is more we wouldn't think of growing a grain crop on it, for we wish to keep the condition where it will make a "garden" at any time.

After picking we immediately turn the vines, weeds and mulch, out of sight, and keep the piece of ground well worked for the rest of the season, or we have done so heretofore. This season, however, we intend to get a growth of cowpeas to turn under late in the fall or leave on the ground as a mulch to prevent any washing of the soil by fall, winter and spring rains.

The piece of ground that we set to strawberries this spring is the same one that gave us such a large yield two years ago. It was kept for a second picking, and then all trash turned under and the ground worked with a spring tooth harrow.

A spring tooth harrow is not the best tool in the world to kill grass, as we have found. There are quite a large number of grass roots alive yet, so we expect to have some trouble with them this season.

We harrowed twice and rolled once before plowing, and four times each after plowing, rolling last.

We marked the piece both ways, 4x3 feet, and set the plants with a spade.

We mean to keep an account of expenses and receipts from this garden, and see what profit there is in strawberry growing. There are 35 rows, 170 feet long, in this garden, 12 Brandywine, 6 Wm. Belt, 6 Warfield, 3 Beder-

(Continued on page 397)

THE DAWN OF WOMANHOOD.

Earnest Words From Mrs. Pinkham to Mothers Who Have Daughters and a Letter From Mrs. Dunmore, of Somerville, Mass.

The advent of womanhood is fraught with dangers which even careful mothers too often neglect.



One of the dangers to a young woman is belated menstruation. "The lily droops on its stem and dies before its beauty is unfolded;" or she may have entered into the perfection of womanhood with little apparent inconvenience or disorder of health. But suddenly the menses entirely cease.

Mother, pubertic malady is taking hold of your daughter, and quick consumption may follow! Take in stant steps to produce regular menstruation.

Lydia E. Pinkham's Vegetable Compound is certain to assist nature to perform her regular duties, procure it at once; there are volumes of testimony from grateful mothers who have had their daughters' health restored by its use. If personal advice is desired, write quickly to Mrs. Pinkham, at Lynn, Mass. It will be given you without charge, and it will be the advice of abundant experience and success.

Read the following from Mrs. CHARLES DUNMORE, 102 Fremont St., Winter Hill, Somerville, Mass.:

"I was in pain day and night; my doctor did not seem to help me. I could not seem to find any relief until I took Lydia E. Pinkham's

Vegetable Compound. I had inflammation of the womb, a bearing-down pain, and the whites very badly. The pain was so intense that I could not sleep at night. I took Lydia E. Pinkham's Vegetable Compound for a few months, and am now all right. Before that I took morphine pills for my pains; that was a great mistake, for the relief was only momentary and the effect vile. I am so thankful to be relieved of my sufferings, for the pains I had were something terrible."

Lydia E. Pinkham's Vegetable Compound; a Woman's Remedy for Woman's Ills



Otwell's Tree Paint Keeps off Borers, Bark Lice, Sunscald, Aphids, Black Scale, Tree Frosts. Best Paint in the world for fruit and shade trees. \$1 per gallon—paints 400 trees. Circular free. 500 agents wanted. W. B. OTWELL, PATENTE, Carlinville, Ill.



EARLY SEED POTATOES FOR SALE.

Write Quick for Prices and Particulars. Money Saved on Tools of all kinds. B. F. FOSTER, Allegan, Mich.

Tested Seed Potatoes.

Banner, Carman Nos. 1 and 3, guaranteed 100 per cent pure, 3 bu. barrel full \$2.75. Prices on Ex. Early Obos and others on application. W. E. IMES, Seed Potato Specialist, Vermontville, Mich.

CHOICE SEED POTATOES that grow by or car load, including the best new and standard varieties. Prices low. Write for catalogue. THE C. C. BRAWLEY SEED & IMPLEMENT CO., New Madison, O.

VINE-SWEET POTATOES, best 50 plants special offer. Mam. Artichokes 75c. bu. High grade Br. Turkey eggs \$1.25 per doz. T. G. BRONITS, Tiffin, O.

SEED CORN. Choice re-selected Gold Mine, best grown. Price \$1.00 per bushel. Bags free when full. A. H. FOSTER, Allegan, Mich.

HONEY MONEY and how to get it is the theme of Gleanings in Bee Culture. A handsomely illustrated Monthly Magazine devoted to Apiculture. Free sample, together with Book on Bee Supplies and Book on Bee Culture to all who mention this paper when writing. THE A. I. ROOT CO., - MEDINA, OHIO.

When writing advertisers mention Mich. Farmer

wood, 2 Crescent, 2 Haverland, 1 Marshall, 1 Cyclone, 1 Enhance, and a few plants each of eight new varieties purchased this spring.

We intend trying a new method on our strawberry patch to be picked this season, one which we have often thought about but never got around to try. Last fall and early winter we applied a mulch of horse manure, covering the vines only, the path being left bare. Our object in doing this was that we might cultivate just as soon as possible this spring. We cultivated them the first time April 12th, with the intention of keeping the cultivator going until about June 1st, when we expect to apply a mulch of green clover for the three-fold purpose of keeping the berries clean, to retain moisture and for the pickers to kneel on.

We noticed, while digging a few plants from this bed, that the soil beneath this covering of manure was ever so much more friable than where there was no covering, and in this respect we believe a mulch of horse manure is better than one of straw or other coarse material. We will report later of the success or failure of our contemplated treatment.

St. Clair Co.

M. N. EDGERTON.

THE SAN JOSE SCALE.

Prof. L. R. Taft, of the horticultural department of the Agricultural College Experiment Station, in a bulletin recently issued containing a spraying bulletin and other matters of interest to fruit-growers, says of the San Jose scale:

The most dangerous of all our fruit tree pests has been found in a dozen or more places in the State and undoubtedly exists in still others. Every effort should be made to destroy the colonies we now have and to prevent its introduction to uninfected sections.

The insect has little power of locomotion, but may be brought in upon nursery stock, or can be carried by birds, and ants and other insects, from tree to tree. It attacks all of our fruit plants and has been found upon various kinds of forest trees.

It propagates very rapidly and three or four broods may develop in a season, so that it will quickly incrust the branches of a tree, which will then look as if plastered with coal ashes. When they first appear, they have a louse-like form and can move about, but they soon settle down, insert their slender beaks into the bark and develop scale-like coverings. During the winter the partially developed scales are black in color, nearly round, flattened; and in most cases, as can be seen with a magnifying glass, have a small nipple at the center, surrounded by a well-marked sunken ring. The size is such that a single scale to the unaided eye looks like a small black spot. The full-grown scales are of a grayish-brown and reach one-sixteenth of an inch in diameter. The scales are but loosely attached to the tree and can be readily scraped off. Beneath the shell-like covering the true insect can be found. These are yellow in color and on being crushed will be found to contain a yellow oily substance.

When the scales are scattered upon the young twigs a purplish color of the bark will be noticed and on cutting into the bark it will be found much discolored. This discoloration of the inner bark is caused by no other scale, and if this is present and the ring-like depression can be made out, it indicates that it is the San Jose scale. This insect will ruin, if it does not kill young trees, and will render large trees unfruitful, and is to be dreaded particularly on account of its rapid reproduction and small size, which render it possible for it to obtain a foothold, and even spread to adjoining trees before it is discovered, as well as because it is difficult to reach and destroy every specimen upon a tree with a spraying solution, while the cost of the materials will make it an expensive undertaking.

In case one has but a few infested trees it will be cheapest and safest to uproot and burn them, especially if they are small and incrustated with the scale.

In attempting to destroy the scale by spraying, some material must be used that has considerable penetrating power. The leading remedies are whale-oil soap, and kerosene, either alone, mechanically mingled with water, or as an emulsion.

As a winter treatment use either a solution of whale-oil soap (one pound to one gallon of water), or kerosene emulsion (one part kerosene, one part soft soap, or whale-oil soap, and three

parts of water). A pump should be used to make the emulsion, and the agitation should be kept up until a cream-like mass is produced. In either case the soap should be dissolved in boiling water and applied while still hot. If kerosene is to be added to form an emulsion, the soap should be removed from near the fire before adding the oil.

Before spraying the trees it will be well to cut them back severely and remove as many as possible of the small shoots; thus the surface to be sprayed will be reduced, and what remains will be near the ground. The application should be very thorough, so as to reach every part of the tree and soak all of the scales. The insects are often under bits of bark, in the crevices of the buds and even beneath the surface of the soil, and pains should be taken that none escape. This application will kill most of the scales, but, as some may survive, another application should be made shortly before the buds open in the spring. At that time the bark will be full of sap, and, if a warm bright day is selected for the spraying, it will be safe to use undiluted kerosene (except, perhaps, upon the peach), provided it is carefully applied. Care should be taken to use a very fine mist-like spray, and to use only as much as will hold to the bark without running down the trunks. If it is allowed to saturate the ground about the roots it may be fatal to the trees.

Nearly as good results can be obtained with less danger of injury to the trees, from a mechanical mixture of kerosene and water, using three or four parts of water to one of kerosene. About the middle of June the young insects appear and a careful watch should be kept for them. If any are found the trees should be sprayed with whale-oil soap solution, or with kerosene emulsion, with eight parts of water to one of kerosene.

Joseph St. John, Oakland Co.: The queries you send are answered in the issues of April 30 and May 7, under the Horticultural head. Direct all inquiries for the horticultural department to The Farmer office, Detroit, so they may have prompt attention.

The Poultry Yard.

THE GAME FOWL.

Despite the prejudice with which the game fowl is generally regarded, arising from their long use in the pit, it is safe to say no other breed has had such an influence in improving the common fowl as the game. It has been the strongest factor in building up many of the improved modern breeds, giving them stamina and constitution, ability to forage for themselves, and to care for and protect their young. No other breed furnishes as good mothers as the game. Besides these merits the game fowl possesses many others. They are excellent table fowls, and above the average as layers. The point most strongly urged against them is their pugnacity, and it is a serious fault, as the young cockerels will fight because they cannot help it. They have been bred for that purpose for centuries, and many of their virtues come directly from this most undesirable characteristic. The intense breeding followed in bringing up the breed to its present standard makes it very prepotent, and a game rooster will always impress his individuality upon his progeny, no matter the breed of hens with which he may be crossed. It is this fact, coupled with his fine form, close plumage, and vigorous constitution which has led breeders to use the game fowl so largely in the formation of new breeds and the improvement of old ones.

A recent bulletin from the Department of Agriculture describes several well known varieties of the game fowl, and says of the breed:

The game fowl is one of the most interesting varieties of domestic poultry. Its origin and history are seemingly linked with all topics concerning poultry and its origin, and even unto this day the game class is looked upon differently than all others. There are two distinct classes—the Pit game and Exhibition game—in the game family, perhaps three, which are as vastly different in character, as though of other families. The Pit game is not reckoned in the standard varieties of poultry, yet for practical and profitable poultry keeping it surpasses the

more pretentious Exhibition game. The type of the Pit game is as distinct, thorough, and characteristic as any of the standard games, differing only, perhaps, in plumage and feather markings. Color is not considered in breeding Pits; it is muscle, bone, and strength that are sought after, bred for, and that distinguish it from its relative—the Exhibition game. Note the contrast in character between the two types: The Pit is short, stout, and stocky, with abundant tail feathering; while the Exhibition game is long, lanky, close feathered throughout, and spare in tail feathering.

For the farm and general purposes the Pit game has always been considered a practical and profitable fowl. It is hardy, matures early, a good layer, and fine for table purposes. Its flesh is considered of exceptional value for eating, being fine grained, tender, and sweet. The hens are splendid sitters and careful mothers.

Of Exhibition games the bulletin says: For a long time the Exhibition game has been a favorite fowl in this country. By careful selection in breeding for many generations they have been brought to a high state of perfection. The beauty of an Exhibition game is much praised in this and other countries and their class is always filled at the numerous shows. They are sought after and courted by fanciers, and as ornamental fowls they have few equals in the number of their admirers. The practical qualities of the Exhibition game have never been demonstrated with accuracy, their tall figures standing in their way to popularity and general usefulness. It should not be understood that they are an unprofitable fowl to keep, but rather not a fowl for farm purposes.

They are, as a class, splendid layers and excellent table fowls, their meat being fine grained, tender, and juicy. They are splendid sitters and mothers. Their tall, commanding, and striking figures are decided contrasts to those of other poultry, and afford a diversion to admirers of fine poultry. The varieties of Exhibition games are Black-breasted Red, Brown Red, Golden and Silver Duckwing, Red Pyles, White, Black, Birchen, Cornish and White Indian Game, Malay and Black Sumatra Games.

BEST FOOD FOR FOWLS.

The natural food of fowls is composed of seeds, insects and grass. In the domestic condition we allow grain, grass and meat. Turkeys and chickens drink very little water when feeding, and even ducks and geese resort to water when feeding, sometimes, in order to wash their bills more than to drink.

This brings up the question of the propriety of feeding soft food. It is known that ground grain absorbs a large volume of water, and when the mixture is apparently dry, quite a large proportion of water exists in it, though more so when the mixture is very moist and sloppy. It is not beneficial water, as the results are sometimes injurious, bowel disease and indigestion prevailing.

It is better to feed all food dry if possible, and keep a trough full of water where the fowls can take what quantity they desire. Even ground food may be given in a dry condition, the different substances being thoroughly mixed and placed in a trough. When chicks are fed they have cornmeal moistened, several times a day, and bowel disease results, simply because too much water is forced upon them in the food. The fowls never resort to wet foods if they can get dry kinds, and this is a matter that deserves attention.—American Poultry Keeper.

BEWARE OF FAT IN SUMMER.

The laying season is drawing to a close, so far as the bulk of the egg production is concerned, and soon the question of surplus fat will become a serious one. There is little danger of a hen laying on fat when she is producing eggs in good number, says the Farmer's Review, any more than there is of a Jersey cow laying on fat when she is in full flow of milk. But when the hen has ceased to lay and begins to take her summer rest is the time when the feed must be looked after carefully. We may feed corn and corn meal with oats and the like during the spring months, for all of the food will be taken care of, but in the months to come the hen will make a use of that same kind of food that will unfit her for summer work. This advice espe-

cially applies to farmers that allow their hens the run of the corn crib. They may be getting a good lot of eggs at this time, but if they do not change their methods they will get no summer eggs. One farmer expressed it when he said he got fewer eggs than any other man in the county, and he had the fattest hens of any man in the county.

What effect fat has on the development of eggs in the fowl is probably not known, but certainly there is a direct effect. We remember one hen that fattened up till she weighed ten pounds. She was too fat to walk. After laying no eggs for months she was killed. Five pounds of leaf fat were taken from her. An examination of the egg producing parts showed that there were quantities of minute eggs in her, but none of these had started on their course of development. There is no danger of feeding too much food if it be oats or food of similar kind, but corn must be given only in limited quantities or not at all.

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Grange Department.

Our Motto:—"The farmer is of more consequence than the farm, and should be first improved."

Address all correspondence for this department to

KENYON L. BUTTERFIELD,
AGRICULTURAL COLLEGE, - MICH.

News from Michigan Granges is especially solicited.

AGRICULTURE IN RURAL SCHOOLS.

At the State Grange of 1894 the special committee on education discussed this subject, and among other things made the following statements:

"We shall not present any extended argument for such teaching, although we would declare our approval of it. We do not favor the immediate introduction of a text book on agriculture into the course of study in district schools, but would precede the use of such a book in the upper grades, if used at all, with the teaching of the elements of sciences, during all of the earlier years of the child's school life. Such a study, carried on as observations and during pleasant rambles, and at odd hours, gradually developing it into a course, we believe is practicable and beneficial.

"It needs no argument to prove to intelligent people the value of the cultivation of habits of exact and acute observation. These habits are formed in the study of natural objects. Then, there is the fund of information acquired, which will be of no small value to every person gaining it. We must also face the fact that farmers, as a class, do not fully appreciate science. But this is a scientific age. Men think and reason and see truth differently, because of science. There can be no question but the teaching of science in district schools would produce a generation of farmers much more advanced in knowledge and thought. And that is what we are all working for. We believe, too, that this science teaching would tend to keep many boys on the farm. Perhaps we are in error, but we believe that the discovery, on the part of youth, of the vast ocean of opportunity to learn that exists on every man's farm, would decidedly influence the brighter minds towards rural pursuits. Such are a few of the reasons for our advocacy of the teaching of agricultural science in district schools.

"There are at least two difficulties in the way of introducing such study. First, there is little demand for it, either from farmers, or from educators. Second, very few teachers are qualified to teach it as it should be taught. At this point we believe the influence of the Agricultural College should be cast strongly for meeting the difficulty,—first, by inspiring a demand for such teaching, and second, by providing an opportunity to district school teachers, in a short summer school of science, to prepare themselves to supply the demand. We believe that this work would not only be proper for the College to foster, but beneficial to its growth and influence."

Thus the Grange was the first agency in Michigan to begin a movement which we believe will prove one of the most revolutionary in agricultural education.

But what we wish to state particularly at this time is that both the Agricultural College and the Department of Public Instruction are doing their best to introduce nature study into rural schools. The now famous report of the Committee of Twelve of the National Educational Association very strongly emphasizes nature study in rural schools. This report is to be used as a text book in our teachers' institutes this coming summer. More than that, the Agricultural College has already published three nature study bulletins designed to be guides to rural teachers in teaching this nature study, and they will issue other bulletins from time to time. These bulletins are also to be used at teachers' institutes this coming summer. Moreover, there is to be held at the College a regular four weeks' teachers' institute, and those attending will have special advantages for preparing themselves to teach nature study.

Now, what we advocate is that the Grange and all farmers turn in and help. The most practical way is to discuss this subject in Granges and then make it a principle to employ teachers for the coming year who are fitted to introduce nature study into your schools. It should not be made an extra study, but, as indicated in the

Grange report, worked in at odd moments and in connection with other work. Farmers can hasten this reform by demanding teachers prepared to teach nature study. When you make the demand, the supply will be forthcoming.

Other states are working along this line, New York being especially prominent. Cornell University has a large number of bulletins, and according to their reports practically all the teachers in the state are receiving some instruction along this line. No movement calculated to improve the condition of farms and farmers can compare in importance, in our judgment, with a rightly directed movement for the introduction of nature study into the rural schools of Michigan.

UNIFORMITY OF TEXT BOOKS.

We are glad to present this week the first of a series of articles on pertinent rural school topics by Commissioner and Brother R. M. Winston, of Clinton Co. The vigorous contribution this week is on the subject of the uniform text-book law.

Now, Patrons, let us discuss this article and subject in Grange and let the correspondents tell us what your opinions are.

GRANGE NEWS.

HURON COUNTY POMONA.

Will meet with Verona Mills Grange on June 2. We wish to see as many fourth degree members present as possible.

MRS. GEO. PANGMAN, Secy.
SODUS GRANGE, No. 123.

Met April 23 with a good attendance and a good program. Our Grange now numbers 42 members in good standing, and have candidates for initiation.

Berrien Co. LAURA MORGAN, Cor.
STEEBINS GRANGE, No. 709.

Initiated five members in third and fourth degrees, May 7th. Maple syrup, biscuits, and pickles were served to about fifty-five members. Members are alive and strong workers.

Antrim Co. M. E. N.
SILICA GRANGE, No. 546.

Held a successful meeting April 30, and instructed two candidates in the first two degrees. Other applications are on the table at present. There will be a harvest feast at our next meeting.

Muskegon Co. CHAS. HORTON.
ALPINE GRANGE, No. 348.

April 30, discussed "Export Bounty," and "The Vegetable Garden." We lately organized a Juvenile Grange, which promises to become very popular. May 7 we shall initiate 17 members.

Kent Co. COR.
MADISON GRANGE,

on Friday evening, April 6, had a volunteer program. Mrs. E. Beal presented the Grange with fourteen volumes of books of valuable literature for the library, which were received with appropriate thanks.

Lenawee Co. E. W. A.
ARCADA GRANGE, No. 500.

April 30, discussed, "What is the crop to raise this year?" Brother Sharrar thinks wheat and beans. Pork and corn suggested by others. Second question, "Shall we elect senators by direct vote?" Decided in the affirmative.

Gratiot Co. A. L. KNAPP, Cor.
ELK LAKE GRANGE.

April 23, conferred first and second degrees upon 17 candidates; also reinstated two members. We have a pleasant hall, with dining room and kitchen attached. We are much encouraged and hope to do good work.

Grand Traverse Co. MARY DEAN, Cor.
PORTAGE GRANGE, No. 16.

April 30, besides the regular order of business, the lecturer read a select piece on the social feature of the Grange, and Sister Matteson gave a fine recitation. After this we enjoyed a maple sugar social. Brother and Sister Wm. Burnett came from Kalamazoo to help us celebrate.

MRS. A. L. HALL, Reporter.
Kalamazoo Co.

NORTH ADRIAN GRANGE, No. 721, conferred the first and second degrees on six candidates May 7. Several members from Adrian and Wolf Creek Granges favored us with recitations, songs, etc. Sister E. Tingley presented the Grange with beautiful stands for the three lady officers, for which she received a vote of thanks.

Lenawee Co. MRS. H. R. L.
WHITE OAK GRANGE, No. 241.

had a good attendance at our last meeting. The defeated side in our contest furnished a short program, after which a bountiful supper was served. April 30 H. R. Pattengill delivered a very interesting and instructive lecture, for the benefit of the

Order. Every one who attended the lecture seemed to enjoy it, and if they wished to, surely gained instruction from it.

Ingham Co. MAY HASTINGS.
BUEL CENTRE GRANGE, No. 714.

Had an interesting discussion on Good Roads at our last meeting. "Spring Work" will be discussed at the next. Are well pleased with library, but with the war news to read and the busy season coming on, there is not much time to read. The librarian thinks if there were more books pertaining to farm work it would be better at this season. But if all took The Farmer it would not be necessary. Hurrah for The Michigan Farmer.

Sanilac Co. MAMIE COLEMAN.
NORTH ROME GRANGE, No. 735.

Good interest is shown and the work is pushing on; members are coming in also. The Grange meeting has been changed so that visits to other Granges are in progress. The correspondent visited the Rome Grange at its last meeting. There were 18 initiated and a good time.

There has been some talk of a new hall and many are interested in plans for the same.

W. GRANT BANCROFT, Cor.
Lenawee Co.

VERONA MILLS GRANGE, No. 667.

At our last meeting the first question for discussion was "How much of success in life depends upon little things?" All were of the opinion that success in life depended almost wholly upon little things; that one must live a pure life, with a character above reproach. This was followed by a question box, and some good questions were discussed. We have lately had a wedding in our Grange, the contracting parties being the Overseer and Lady Assistant Steward.

MRS. LAURA HUNT, Reporter.
Huron Co.

HAMILTON GRANGE, No. 355.

Arbor day was observed by our Grange, April 30, by planting fifty nice shade trees south of the hall. A special program was given, conducted by Bro. C. W. Byers. Our lecturer has assigned her work to different members, so we have a new lecturer every evening.

Two new members took the fourth degree. Bro. Mallory has started to experiment on sugar beets. If conditions are favorable our Grange will raise a portion of their own sugar in the near future.

Van Buren Co. CHAS. WAGNER, Cor.
KENT COUNTY GRANGE

will hold its next quarterly meeting with Silver Lake Grange, five miles southeast of Rockford, June 1 and 2. The program will begin Wednesday afternoon at 1 o'clock. There will be reports from subordinate Granges of membership, and what work they are doing, and a discussion on "The Future of Agriculture. (a) Shall it be Specific or General Farming? (b) Shall it be Taught in Our Public Schools?" led by John Preston, Harmony Grange, and Frank Furner, Evans Grange.

Wednesday evening will be discussed, "Is the Grange Making any Advancement in the Co-operative Features of its Work?" and "The Future of Our Boys and Girls." Fifth degree will also be conferred.

Thursday forenoon will occur the business meeting, etc. Also discussion on "Is Present Law Regarding Burial Permits Satisfactory?" and "Would it be a Benefit to all Patrons for Kent County Grange to send Delegates to the State Round-up Farmers' Institute?"

This program will be interspersed with plenty of songs, recitations and two big dinners—one upon arriving and one upon leaving.

CAPITOL GRANGE, No. 540.

The Lecturer, Mrs. K. L. Butterfield, has divided the Grange into twelve sections of about 13 members each, appointing a leader for each section. The object is to amply employ all the Grange talent and afford entertainment.

Sister Jennie Buell's section gave the initial program last Saturday evening. Music, quotations, recitations, current events, and a talk on "Farming in Germany" by Prof. W. O. Hedrick, of M. A. C., made up the evening's entertainment. Prof. Hedrick's address brought out the following points:

1. German farmers live in villages and no farm houses or fences are seen in the country.

2. Among the peasant farmers is found very little modern agricultural machinery, and the larger proportion of the work is done by women. Very few horses are seen, dogs being used for means of transportation. Nearly all work is done by hand.

3. No corn is grown, but large crops

of potatoes, tobacco and sugar beets are raised.

4. The village life is not calculated to develop a love for clean living. Nearly all the villages visited by Prof. Hedrick were unclean, non-progressive settlements.

"The hamlet school is the rural school of the future," says Prof. Bailey. We are doubtful if such a change would be a good one if American hamlets resembled the European-German hamlets.

ELANCHE McCLURE, Cor.
Ingham Co. ROME GRANGE, No. 293.

April 30, about fifty members attended. The first and second degrees were conferred on a class of eighteen candidates. There were several visiting members from West Adrian and North Rome Granges. Had a paper on "Will there be any need of the new man when the new woman comes to the front?" by P. H. Dowling. The subject was treated from the standpoint of the new woman. From the last United States census report it was shown that out of 128 different occupations over 4,000,000 women are engaged in 127 of them. From the new woman's usurpation of man's legitimate vocations, and her professed hatred of him, it is fair to conclude that when the new woman comes to the front the new man will be useless.

A paper was read on "Woman fifty years ago," by Mrs. L. S. Chase. She referred to her own experience; told of various kinds of work she had done in early pioneer life in Michigan. Besides the ordinary housework she did the spinning, weaving, dressmaking, tailoring, and boot and shoe making, for a large family. Her fight with the wolf and lucky escape from it made the younger members of our Grange think they were certainly deficient in the courage of their grandmothers 50 years ago.

Paper, "Which is the best way to raise corn, to drill it in or row it both ways?" by Luther McRobert. He had no experience in drilling corn, but inclined to rowing both ways, as giving a better chance to destroy weeds.

Rome Grange has nearly one hundred members now, with the promise of more.

Lenawee Co. DORA L. DOWLING, Cor.

UP-TO-DATE RURAL SCHOOL TOPICS.

I. THE UNIFORM TEXT-BOOK LAW.

By Com'r R. M. Winston, Clinton Co.

Under the above title the last Legislature adopted a new text-book law, known as Act 189, Public Acts of 1897, and found in Chapter 25, General School Laws.

The title is a misnomer and misleading. If the provisions were severally carried out as the electors might vote to do under the provisions of the law, some districts now having free text-books, as provided under Act No. 147 of the laws of 1889, others voting to provide free text-books in compliance with the recently enacted law, and still others voting not to come under the provisions of the law, to say nothing of others that will not vote at all, and thus place themselves in a position to be compelled to use books selected by the Text-Book Commission, would produce an educational chaos that would startle the intelligent looker-on, not only of this, but of other states.

The feature of the law which provides for submitting the question of free text-books to the voters is a good one. The free text-book plan appears to work satisfactorily for cities, and perhaps it is a good plan for rural districts. My experience, however, with the administrative feature of rural schools does not make me a believer in the plan of free text-books for rural schools. Taking into consideration the fact that we shall be further from uniformity by coming under the new text-book law, I shall have to advise my people to vote in the negative. I do not believe in the principle of state publication of school books, nor do I think it advisable to create a monopoly by state legislation to correct evils growing out of the misdeeds of corporations and trusts. Laws should be passed to hold in check powerful corporations, but no law should be passed that would have the effect of creating a monopoly, or that would hinder or limit the free exercise of individuality.

The proper way to correct these evils is to give the people an opportunity to select the best school text-books from the various competing publishing houses, so they may not be compelled to use inferior books that may be foisted upon them by a monopoly created by legislation. As regards the prices of good school text-books, the

competition among publishers will always regulate them to the extent of making them reasonably fair. All of our people know that they can purchase their supplies in open market where competition controls quality and price to better advantage than if they were compelled by law to purchase from one producer.

A bill similar to the law we are discussing was before the Iowa legislature during its last session, and the "Homestead," a farm paper published in that state, in its issue of March 25, 1898, commented as follows:

"The bill now pending in the Iowa legislature, which contemplates an entire revolution in the methods by which text-books shall be furnished for use in the public schools, is one of special interest to the farmers of the state, for to them will accrue a large portion of the advantages if the changes proposed are good, and an equally large share of the burdens if they be bad. The 'Homestead' has already expressed very decided views on the subject adverse to the proposed change. It is believed that the pending measure has, as its sole claim to legislative attention, an air of economy which is entirely false and delusive, and that its adoption would be attended with evil to the schools and demoralization to the public conscience, in the corruption and jobbery that would follow its passage, for which the measure furnishes not even a pretense of compensation."

In this connection it published a long letter from the Hon. John Cownie, President of the Iowa State Agricultural Society, from which I take the following:

"In the proposed bill there are three distinct methods provided for furnishing text-books, viz.: by contracting with publishers for text-books to be published in Iowa, nothing being said in regard to their being published and bound in the state; second, by contracting with authors who are willing to sell their manuscripts; and third, by arranging with those who are willing to undertake the completion of a book or books, or a series of books.

"Again, if the bill should become a law, the use of the books received is made compulsory, with a heavy penalty attached to the use of other school books. What would the farmers of Iowa think of a bill for an act to create a commission to select a certain line of farm tools, contract for their manufacture, and make their use compulsory upon the farmers of Iowa, and a failure to comply to be punished by a fine and imprisonment in the county jail, as provided in this act in regard to uniformity of school books? What matters it if the tools were furnished a dollar or two cheaper, or the school books for a few pennies less? Will the farmers of Iowa surrender their rights to the commission appointed by the Governor and accept such books for the education of their children, or tools for the cultivation and harvesting of their crops, as such a commission would choose to designate?

"There is not a farmer in Iowa who would trust a commission appointed by the Governor to select his tools and machines for use on the farm, and the most progressive farmers do not hesitate to pay a few dollars more for their favorite machine than they would have to pay for one that might suit someone else, but would not prove satisfactory to themselves."

I heartily concur in the above extract from the Iowa "Homestead." I shall counsel my people to wait until the Text-Book Commission has selected its books. When that is done, we can more intelligently determine what is the better course to pursue. To place districts in a position to wait until the commission shall have acted will require a vote at the next annual meeting not to come under the recently enacted uniformity law.

St. Johns, Mich.

UNIFORMITY OF SCHOOL TEXT-BOOKS.

In connection with the article by Commissioner R. M. Winston on the above subject, we print a communication to subordinate Grange Lecturers, from Bro. Jason Woodman, State Lecturer.

For many years the State Grange, speaking for the farmers of the State, has asked the legislature to pass a law providing for a uniformity of school text-books, and that they should be published under the supervision of the State at a reasonable cost. This measure was asked for, 1st, because the heterogeneous mass of books always used in Michigan caused a great inconvenience to people who, for any reason, moved from one school district

into another, and who had children of school age, often compelling the purchase of an entire new set of school books; 2d, the school books now used are sold at unreasonably high prices; 3d, under our present system there is an unlimited opportunity for "jobbery" between book publishers and school boards—an opportunity not infrequently used.

During the session of the legislature held in 1897, Hon. R. D. Graham, of Kent county, a member of our Order, introduced a bill along these lines; and inasmuch as the writer has been assured by both friends and foes of this law, that a determined effort will be made to repeal it next year, it was thought best that the members of the Grange and farmers generally have a definite knowledge of the provisions of the Uniform Text-Book Bill. This law which goes into effect in 1899 provides:

"That the State Board of Education, together with three county school commissioners to be appointed by the Governor and to serve for the term of five years, shall constitute a Board of Commissioners for the purpose of making a selection or procuring the compilation for use in the common or primary schools of the State of Michigan of a series of text-books in the following branches of study: Spelling, reading, arithmetic, geography, English grammar, physiology, history of the United States, civil government of the United States and civil government of Michigan, algebra, physics, and a graded system of writing books: Provided, That none of such text-books shall contain anything of a partisan or sectarian character: And, provided further, That the foregoing books shall be at least equal in size and quality as to matter, material, style of binding and mechanical execution to the following text-books now in use, namely: The speller to Harrington's spelling book, the readers to Swinton's readers, the arithmetics to Milnes' arithmetics, the geographies to Frye's geographies, the grammars to Hyde's grammars, the physiology to Hutchinson's physiologies, the histories to Fisk's histories of the United States, the civil government to Thorpe-King's civil government of the United States and to Thorpe-King's civil government of Michigan, the algebra to Wentworth's algebras, the physics to Gage's physics, and the writing books to the Eclectic copy books."

The Board of Commissioners shall advertise for sealed proposals for printing and furnishing school books, and shall negotiate with authors for manuscripts which may be purchased with copyright of such books for use in Michigan schools.

All proposals for compilation and publication of such books shall be accompanied by a sufficient bond for faithful performance of contract, and by an affidavit to the effect that the firm or person bidding is not in any way connected with any other person or firm bidding for such contract.

"Provided always, That such board shall not, in any case, contract with any author, publisher or publishers for the furnishing of any book, manuscript, copyright or books, which shall be sold to the people for use in the public schools of this place at a price above or in excess of the following, which shall include a profit to the retail dealers in such books of twenty (20) per cent, namely: For a spelling book, fifteen (15) cents; for a first reader, fifteen (15) cents; for a second reader, twenty-five (25) cents; for a third reader, thirty-five (35) cents; for a fourth reader, forty-five (45) cents; for a fifth reader, sixty (60) cents; for an arithmetic, intermediate, thirty (30) cents; for an arithmetic, complete, forty-five (45) cents; for a geography, primary, thirty-five (35) cents; for a geography, complete, ninety (90) cents; for an English grammar, elementary, twenty-five (25) cents; for an English grammar, complete, fifty-five (55) cents; for a primary physiology, twenty-five (25) cents; for a higher physiology, seventy-five (75) cents; for an elementary history of the United States, thirty (30) cents; for a complete history of the United States, seventy-five (75) cents; for a civil government of the United States, sixty (60) cents; for a civil government of Michigan, twenty-five (25) cents; algebra, for beginners, thirty-five (35) cents; algebra, complete, sixty (60) cents; for copy books, each five (5) cents."

Books are to have retail price stamped plainly on the cover, and are to be furnished to retail dealers, and school boards in districts having free text-books, at a discount of 20 per cent from the price stamped on the cover. A discount of 50 per cent from contract

price is to be given in exchange for books of the same grade, when the books provided for in this bill are first introduced in the schools.

Any dealer who sells or tries to sell any of these books at a price in excess of the contract price shall be subject to fine and imprisonment.

No district shall be prohibited from using supplementary books, and its provisions shall not be mandatory on any district which already has the free text-book system, or that may decide by vote not to come under the provisions of this act.

"As soon as such Board of Commissioners shall have entered into a contract or contracts for the furnishing of books for use in the public schools of this State, pursuant to the provisions of this act, it shall be the duty of the Governor to issue his proclamation announcing such fact to the people of this State."

This bill will be found on page 252 of the Public Acts of the Legislature of 1897. These volumes may be found in the county offices, and I suggest that where possible the full text of this bill be studied by those taking part in the discussion of this law in our Granges. This bill was introduced jointly by Mr. Graham in the House and by Senator Forsyth in the Senate. These men are of different political parties and the bill is thoroughly non-partisan.

There was a strong lobby at Lansing nearly all winter opposing this measure. School book concerns and city school boards opposed it for reasons which can easily be understood. Most of the country members of the legislature were in favor of it, and the members from Detroit generally voted for it. The hardest fight was put up in the Senate, but after the necessary 17 votes to pass it had been secured, Senators who had denounced the measure as iniquitous, a job, and a measure that would cost the State an immense amount of money, voted for it and thus went on record as favoring it. This law is not an experiment, a similar one being in operation in Canada. This law provides for books of a first-class quality, general uniformity, and cuts the cost in two in the middle; and it is safe to say that but few districts will avail themselves of the provision in the bill permitting them to remain under the present system.

TO CORRESPONDENTS.

I should like to have Grange correspondents report to The Michigan Farmer their conclusions arrived at in this discussion and answer these questions: 1st. Will the school districts in your community adopt this system? 2d. What objections have you to it? 3d. What amendments, if any, should be made to it? 4th. Would it be wise to have this law repealed and remain under the present system?

Van Buren Co. JASON WOODMAN,
Lecturer State Grange.

THE WORK OF THE GRANGE.

Editor Grange Dept:

Your letter asking me to give my views of the Grange is before me. I was a charter member of Batavia Grange, No. 95, so you will see that I joined one of the first Granges organized. I had my views then as to what the Grange should do, and they have not changed much since.

The principal work of the Grange should be to educate the farmer. With a proper education comes a multitude of blessings. I joined the Grange to get the benefit of its social and educational advantages, and for these same reasons I continue to work for it and with it year after year. I believe it makes us better citizens and better and more intelligent farmers. The Grange rightly conducted brings us a stock of information which we cannot get except through a similar organization.

You will pardon me for referring to our own (Batavia) Grange to illustrate what I think properly belongs to Grange work. In common with other Granges our Grange is constantly receiving resolutions, petitions, etc., asking for our endorsement. They are seldom endorsed or rejected by our Grange until the subject under consideration has been thoroughly discussed. We frequently discuss a

(Continued on page 400.)

Modern Roofing.



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\$1.85 Excursion to Grand Rapids—Sunday, May 15th.

The Grand Trunk Railway System, Detroit and Milwaukee Division, will run an excursion, Detroit to Grand Rapids, at \$1.85 for round trip. Special train leaves Brush St. depot 7:00 a. m.; Gratiot Ave. 7:05; Milwaukee Junction 7:30. Tickets are valid to return by special train Sunday, or on train of Monday, 16th. Remember \$1.85 for round trip.

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question two or three evenings before it is voted upon. We claim that we have as much right to reject as to endorse any matter sent here for our endorsement. We have under consideration the subject of the Postal Savings Bank. It has not come to a vote yet.

I believe that one man inside of an organization has more influence than ten men outside of any organization. The Grange has an influence, and every Patron should seek to increase that influence. We should aim to have a great influence in any matter where we choose to exert it. To have that influence we secure and retain the confidence and respect of candid, thinking men outside the Grange. To secure this confidence we must deserve it. We can only deserve it by considering well every subject which is brought before this Grange for its endorsement.

We have in this county eight Grange halls. We aim to have a grand rally of the fraternity at least eight times each year. At these meetings subjects are brought forward which have been previously discussed by Subordinate Granges, and in this way we aim to do pretty thorough work in the Grange.

Educational work should be the great object of the Grange. Then when we are once organized we are ready to support any financial schemes which promise profit. I think as a Grange we should not be too hasty to sanction such schemes. We should consider whether we can engage in business enterprises without losing sight of the main object of the Grange. We should consider well whether it is not better to buy our groceries of the home grocer, our clothing of the home clothier, our shoes of the home dealer, so long as they deal fairly with us, trusting to the Grange to furnish the knowledge which will detect the fraud when we are defrauded; also for the knowledge which will suggest a remedy.

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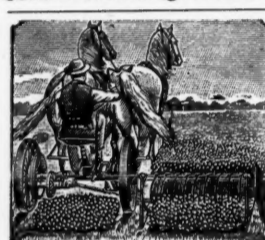
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